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ORIGINAL ARTICLES.

CLINICAL NOTES OF FOUR CASES OF
ABDOMINAL SECTION.

READ BEFORE THE N.S.W. BRANCH OF THE B.M.A.

BY THOMAS CHAMBERS, LECTURER ON MID-
WIFERY AND DISEASES OF WOMEN AT THE
SYDNEY UNIVERSITY, GYNECOLOGICAL SUR-
GEON TO SYDNEY HOSPITAL, ETC.

ABDOMINAL section is now so common that little, if any, practical information is gathered by the average observer. It is only from a careful digest of individual, non-selected cases that we can gather object-lessons calculated to fix our attention.

Complications correctly recorded and carefully assimilated are not without their value, especially to those who are entering upon this branch of professional toil, as such digests are calculated to determine general principles and give shape to individual action. The cases here recorded were all under observation at the same time, each having its individuality and tending to illustrate some error or excellence which characterizes this field of labour.

CASE I.

For the early history of this case I am indebted to Dr. Walley, of Tamworth. On May 20th, 1892, he was called to see a girl of 16, living in a Chinaman's den, where she had been some time, smoking from 30 to 60 grains of opium daily, and taking a considerable quantity of alcohol occasionally. She complained of acute pain in the left iliac region and obstinate constipation. He prescribed castor oil and opium with hot fomentations. She was much better next day, but on the following day the pains returned with increased severity, accompanied by local swelling and tenderness, dry tongue, quick pulse, and high temperature. As her general condition was unpromising, and her environment unsatisfactory, he took her into the Tamworth Hospital at once (May 22nd).

A painful swelling now appeared in the right iliac region. On June 6, fluctuation being distinct, and as there were no vaginal indications for interference in that direction, a free opening was made 2 inches to the right of the median line, giving exit to a large quantity of offensive pus. The pus cavity was freely irrigated, and a rubber drainage tube secured in the wound. For many months the pus flow was not only continuous, but in great excess, and uninfluenced by treatment, whether of a local or constitutional character.

The wound was thoroughly irrigated with different compounds, such as iodine, chloride of zinc, carbolic acid, etc., then it was freely curetted and carefully packed with iodoform gauze, but without avail. Despairing of success, he discharged her from the hospital on December 9th, 1893, after a sojourn of eighteen months, and sent her to me with a letter, from which I have culled the above facts. I may say that Dr. Walley regarded this case as one of gonorrheal infection from the first.

She was admitted into the Sydney Hospital under my care on January 1st, 1894, when the following notes were taken by Dr. Corlette. Patient is very thin and anæmic. Menstruation irregular and scanty, continuing two or three days. She suffers much from severe pains in the back, hips, and lower abdomen during the flow, as well as from constant leucorrhœa. Diarrhœa is more or less constant, with frequent discharges of pus from the bowel. Bladder irritable, sp. gravity of urine 1010, no albumen or sugar. Appetite defective, constant indigestion and sleeps very little. The abdomen is much distended by irregular non-dulations, varying in size and sensibility, but all are alike fixed. On the right side of the median line there is a dense cicatrix having a central opening, emitting a free discharge of offensive pus. The sound passes down into the pelvis for 4 inches. P.V., uterus small and fixed, vaginal roof hard and indurated, and there is a fistulous opening in the posterior fornix; P.R. nothing special.

January 25.—The patient being under chloroform, an attempt was made to dilate the opening in the cicatrix, which failed; it was then incised sufficiently to admit two fingers, a careful digital exploration was made, several pockets of pus were opened, and a large mass of gelatinous granulations were removed from the sinus cavity; there was also free hæmorrhage. The nodulations felt through the abdominal wall were found to be coils of intestine inseparably matted together, and the whole of the pelvic contents were so intimately blended by inflammatory effusion and adhesions, that no individual organ could be made out; hence nothing could be removed. The fistulous opening in the vaginal roof was dilated sufficiently to admit a half-inch rubber drainage tube, which was carried upwards and fixed in the abdominal wound. The abdominal cavity was thoroughly irrigated, and the upper part of the wound closed and dressed in the usual way.

January 30.—Has held her own fairly well since the operation, but as intestinal gas was escaping through the tube, it was removed and

replaced by one half its size, a large pocket of laudable pus being opened during the process.

Feb. 20.—Tempr. 103, pulse 130. Skin hot and dry, face flushed. Moderate thirst, no appetite, bowels active, skin to be sponged frequently with warm vinegar and water. Condition unsatisfactory.

Feb. 10.—Free discharge of fæces through the wound, drainage tube removed. The discharge from original wound is excessive, as well as from numerous burrowing sinuses leading off from original cicatrix. Loathes every kind of food and stimulant. Pulse and temperature much the same. To have a meat suppository and five grains of quinine every 4 hours, and a sedative when necessary.

Feb. 20.—General condition practically unchanged. She is painfully emaciated, so that great care and watchfulness are necessary to keep her skin intact. The intra-peritoneal modulations hee rapidly diminishing both in size and sensibility. She is so exceedingly thin that they can be thoroughly outlined. Several sinuses were opened under chloroform. The fæcal discharge through the wound is considerable, implying that the fistula is of large size. Temperature 103, pulse 120.

Feb. 26.—General improvement. Temperature, normal in the morning, evening 100. Appetite much improved; discharge less. There is still a free discharge of fæcal matter, and there is also a free discharge of pus by the bowel.

March 5.—Discharge diminishing, wound contracting, fæcal discharge decidedly less, ravenous appetite, making flesh fast. Temperature, morning, 98; evening, 99. Sleeps well.

March 30.—Not much discharge, no fæcal matter for ten days. Wound less than a shilling, appetite excellent, temperature ranging from 96-5 to normal in the evening.

April 7th.—Progressing satisfactorily; wound much less; but as there is still a discharge, 30 drops of iodine tincture were injected into the wound, which gradually percolated through vaginal opening. Three days later (the 10th) the injection was repeated, and on the 18th fæcal matter again appeared in the wound. Injection discontinued. The inference was that the rectal fistula had been closed by adhesion to some portion of the pelvic contents, and that the adhesions had been in part disorganized by the iodine injections, hence the reappearance of the fæcal matter in the wound.

April 30.—Wound all but closed, moistened by a little purulent discharge. No fæcal admixture for nine days, hence the inference (and hope) that the fistula had finally closed. She appears to be in excellent health, but not, as yet, very strong on her legs. There has been no attempt at menstruation since the operation.

May 22.—Discharged from the Hospital to-day and sent to the Walker Convalescent Home.

October 24.—She called upon me to-day in excellent health. Menstruation returned while at the Walker Home, and continues normal both as to duration and quantity, no dysmenorrhæa, she weighs 10st. 4lbs.

CASE II.

Aged 58, but looks much older. For the previous history of this case I am indebted to the kindness of Dr. Codrington of Orange. She was twice married and had borne six children. She first consulted Dr. Codrington and his partner, Dr. Kelty, on November 16, 1893. She then was suffering much discomfort from a large cystic abdominal tumour. They advised an immediate operation, which she positively declined. On January 8, 1894, her sufferings were so severe that she reluctantly submitted to be tapped, and on March 1st the operation was repeated.

On March 24th I saw her for the first time at my rooms. She was greatly emaciated and moved about with much difficulty and personal discomfort. The abdomen was greatly distended with a fluctuating tumour of considerable proportions, and manipulation was very painful to her, implying general peritoneal irritation. The respiratory movements were limited from upward pressure, pulse 110, temperature 99, heart-sounds feeble and irregular. From the rapidity with which the cyst had re-filled, the severe local and constitutional suffering, the weak pulse, and rapid emaciation, I regarded the case as one of suppurating ovarian cyst. Hence, any method of treatment was anything but promising under the circumstances, while any chance, however small, must necessarily come through the medium of abdominal section.

To this mode of treatment however, she decidedly objected. I advised her to go to her quarters and carefully think over the matter and sleep upon it. If she should decide to take the chance open to her, however small, the operation should be done without any unnecessary delay; but if she decided against it, she had better get home at once while she had the opportunity. Two days later her husband called and told me "she had made up her mind to face the operation."

She was admitted into the Sydney Hospital under my care on March 27th, and the following notes were made by Dr. Armstrong:—Patient has a large tumid abdomen, which prevents her resting in bed unless well propped up. Circumference 46 inches, percussion note uniformly dull to within two inches of the ensiform car-

tilage. There is a fluctuating wave over the whole abdomen, but more distinct in some parts than in others. The abdomen has been gradually getting larger and her bust smaller for two years. She first felt severe pain in the tumor three or four months ago, when she sought advice and was tapped, when "14 quarts" of fluid were drawn off. She was tapped again three or four weeks ago, when "only nine quarts" were drawn off. She has wasted rapidly since the first operation, and is troubled with swelling in the feet and legs. Vomited a good deal three months ago, no cough, bowels and bladder act satisfactorily, respirations quick and shallow, has to be propped up in bed, temperature ranges between 97·5 and 99·4, pulse from 110 to 120.

March 31.—Under the influence of ether, an incision was made in median line from an inch above the umbilicus to within an inch of the pubes. After separating the parietal adhesions, a multilocular ovarian tumor was exposed, every inch of the tumor surface adhering closely to the surrounding tissues. While the parietal adhesions were being separated, the parent cyst suddenly ruptured, giving exit to several quarts of stinking pus. More than an hour was taken up in separating the extensive adhesions which were in many parts, especially about the pelvis, too dense for separation except by the handle of the knife or the blunt pointed scissors. When the dense adhesions in right ovarian region were separated, the tumor turned out without any indication of a pedicle, neither could I find any trace of ovary or Fallopian tube. The left ovary was very small and atrophied, but in its normal position.

The absence of the pedicle may be explained, perhaps, by assuming that the tumor had, in its early days, been freely rotated upon its axis, that hæmorrhage had taken place into the cyst, followed by suppuration and universal adhesion, and that the pedicle had been so twisted that it had lost its identity in the intimate adhesions which were met with in the position where it should have been found. I have seen several cases where the pedicle had become so twisted and devitalised, that it was with difficulty made out. The tumor consisted of several cysts, each containing a different kind of fluid varying from clear serum to well-formed pus. The parent cyst was undergoing degenerative changes in several patch-like circles. The transverse colon, as large as my arm, was closely adherent to the upper border of the tumor and to the anterior abdominal wall. The peritoneal cavity was thoroughly irrigated, the wound rapidly closed, with a drainage tube in the lower angle. The poor woman was so much collapsed when the operation was completed, that reaction could

scarcely be hoped for and certainly not depended on. The skin was cold and pallid, pulse 140, very small, temperature 97, respirations slow and irregular.

Eight p.m., moderate reaction, but very sick, temp. and pulse about the same. The upper part of the abdomen much distended and painful. To have two drops of croton oil.

April 1st, 9 a.m.—Has not passed a very good night. Bowels have been relieved a little, while the sickness and distention are much the same, temp. 97·5, pulse 120. Repeat croton oil.

April 2, 9 a.m.—The bowels have been well relieved, sickness and distention subsiding, temp. 97·2, pulse 100, asking for food. From this time forward her progress was uneventful. Takes food well, and sleeps eight or nine hours in 24, the temperature ranging from 97 to 98, and the pulse from 72 to 84. She was discharged quite well on May the 10th.

CASE III.

Aged 39, but looks 20 years older. She came from Forbes, and was admitted into the Sydney Hospital under my care on May 12, 1894. The following notes were taken by Dr. Armstrong two days later. Patient has had six children, the last three years ago, confinement natural and easy. Three months after her confinement she first noticed a lump in the right iliac region as large as a hen's egg, which was painful at times. Believing herself to be pregnant, she consulted a nurse, who advised her to take penny royal and salts. Her changes came on in a day or two; the menstrual fluid was unusually dark-coloured and in great excess. From this time menstruation was regular in time, but excessive in quantity and continued from 10 to 14 days. This excessive menstrual flow continued for eight months, and during these months she rapidly lost both flesh and strength.

At the 9th month, instead of the menstrual flow, she was suddenly seized with severe pain in the right iliac region, which continued three weeks, with swelling in the abdomen, legs and feet, the abdomen being very painful. After the pain ceased the swellings subsided, but the original lump in right iliac region continued to increase and could now be easily moved about. There were no further vaginal discharges of any kind for several months.

Four months after the pain and swelling in the abdomen and legs had passed away, she noticed a swelling in the right femoral region, followed by similar swellings in both inguinal regions. All these swellings appeared within a month, and from this time the abdomen enlarged somewhat rapidly, while her flesh and strength gradually

diminished, notwithstanding a never-failing appetite. She has had a troublesome cough for three years, dating from an attack of influenza. Bowels regulated by laxatives. She always had excellent health until her last pregnancy. No history of alcoholic excess.

Present condition.—The patient is painfully thin and emaciated. I have never seen a living woman more skeleton-like. The face is pinched and anxious, the heart-sounds distinct but faint, and there are moist sounds at right apex. The abdomen is painfully distended, and there are umbilical, double inguinal, and right femoral hernia, all of considerable size, and the superficial abdominal veins are distended and tortuous—a common accompaniment of intra-abdominal cancer. The abdominal walls are thin and tense from over-distention by an excess of ascitic fluid in which a dense irregular body moves like a cork in water, although it appears to be securely anchored at its base.

The question of diagnosis was necessarily interesting from the element of surrounding doubt. The history of the swelling, its duration, and the extreme emaciation, pointed pretty clearly to ovarian disease. While the uncertainty as to a possible pregnancy, combined with the extreme thinness of the abdominal walls, and the great mobility of the irregular and resisting body in ascitic fluid, suggested a possible abdominal foetation. (I have seen a case of abdominal foetation where these several characteristics were accurately represented.) While trying to determine in my own mind whether the case was one of ovarian disease or a sequel of conception, my colleague was regarding it from quite another point of view. From the great emaciation, the distention and tortuosity of the superficial abdominal veins, the excess of ascitic fluid, and the fixation of the tumor at its base, he regarded the case as one of intra-abdominal cancer. Hence, it became evident that an exploratory incision was necessary to a correct diagnosis. The abdominal measurements were:—Circumference $40\frac{1}{2}$, and the median, line from ensiform to pubes 23 inches.

P.V.—The uterus was pressed backwards against the sacrum, length of cavity four inches, and the uterine body moved freely with the movements of the tumor, implying an intimate connection between them.

On May 17th a moderate incision was made in the median line, and as the abdominal parietes were unusually thin the, first stroke of the knife opened the peritoneal cavity. From this opening there shot up a fountain like a stream of dark porter-coloured fluid; 150 oz. were collected, but much more escaped. As the fluid escaped the

hernial sacs collapsed, and a large, irregular multilacunar ovarian tumor presented at the wound, which was extended upwards by scissors to the umbilical hernial sac, which was embraced in an elliptical incision and removed and downwards to near the pubes.

The tumor had contracted numerous and extensive adhesions to the omentum, intestines, uterine fundis, &c. These were carefully separated and tied off, and the twisted pedicle was transfixed, tied and separated in the usual way. As the other ovary (the left) was much enlarged and cystic, it was also removed with the Fallopian tube. The abdominal cavity was well irrigated with a solution of common salt, a drainage tube introduced, and the wound closed as quickly as possible, as there were present unmistakable signs of severe nervous shock. She took the anæsthetic badly at first, being considerably cyanosed until tension was relieved by the escape of the ascetic fluid.

6 p.m.—A good deal of abdominal pain, pulse 124, temperature 97.5. Fluid running over drainage tube of a dark-red color. Hypodermic morphia gr. $\frac{1}{2}$. Much in the same condition at midnight.

18th, 9 a.m.—Has passed a bad night, very sick, upper part of abdomen distended and painful, pulse 120; temperature 98.4.

8 p.m.—Vomiting almost constant, temperature 100, pulse 124, distended abdomen. Enemas returned without either gas or fecal admixture. To have 10 grs. of calomel at once, and followed in two hours with two drops of croton oil, and repeated in four hours if necessary— $\frac{1}{4}$ th of a grain of morphia hypodermically when pain is troublesome.

19th, 9 a.m.—Bad night, distention and vomiting are still urgent. The combined results of calomel, croton oil and turpentine enemas unsatisfactory. Croton oil to be repeated every four hours until bowels are relieved satisfactorily. Cough troublesome. The combined effects of constant vomiting and coughing are exceedingly trying to the poor thing. Prognosis unsatisfactory.

20th, 9 a.m.—A large quantity of offensive focal matter has been passed, having the odor of badly decomposed meat. No vomiting since the bowels were freely relieved, and the cough is less troublesome. Has slept several hours, feels much better, and is asking for food.

21st, 9 a.m.—Has passed a good night, slept $9\frac{1}{2}$ hours, bowels thoroughly relieved. The abdominal distention subsiding, the drainage tube removed, temperature normal, pulse 96. May have anything she can eat.

26th.—Feels quite well, sleeps from nine to

twelve hours in the twenty-four. Appetite excellent, wound firmly cicatrized, bowels regulated by saline aperients. From this date her progress was uninterrupted. She had an excellent appetite and made flesh very rapidly.

On June 26th she was discharged in order to be sent to the Walker Convalescent Home. Before she went, however, the surgeon of the week, Dr. Fiaschi, saw her about her ruptures. He advised her re-admission after leaving the Convalescent Home. On re-admission, Dr. Fiaschi did not think any operative interference necessary, and she returned home in excellent health and spirits.

CASE IV.

Is one of suppurative septicæmia, following abdominal section of unusual difficulty and severity. For the previous history of this case I am indebted to Dr. Thomas, of Manly. Mrs. F., aged 41, married seven years. In the latter months of 1889 she became pregnant for the first time, and during the whole period of gestation she suffered severely from local pains and inability to take any kind of exercise. In July, 1890, labor came on at full term. The presentation was right occipito-posterior, and as rotation forward did not take place labor was both protracted and painful. Ultimately she was delivered by turning under chloroform, the forceps having twice failed to bring down the head. The child was still-born. Convalescence was protracted and unsatisfactory, having been interrupted by sundry rigors during the first twelve days.

All her menstrual life she had suffered much from leucorrhœa, and to this were now super-added continuous pains in the lumbar and sacral regions, which gradually increased in intensity until May, 1893. On the 23rd Dr. Thomas saw her for the first time, as she had hitherto been under the care of his predecessor. On vaginal examination he found the fundus uteri resting between the sacro-uterine ligaments, which he pressed upwards, and packed the vagina with glycerine plugs. The sound was not used, as she had passed a week over her time. In a few days he put in a Hodge, which had to be removed in the evening, because of the severe pain it excited in the left ovarian region.

On June 17 she suddenly developed acute peritonitis, which ran rather a severe course. On July 19th I saw this lady for the first time. Her periods were pretty regular in time, but excessive in quantity, and during the menstrual intervals there was a free and continuous leucorrhœal discharge, which had been a source of much discomfort and annoyance since her confinement. On September 23rd I curetted the

uterine cavity, Dr. Thomas giving chloroform. The curetting modified the menstrual flow and stopped the leucorrhœal discharge, while the lumbar and sacral pains remained much the same.

Two months after the curetting she again became pregnant. At the end of the third month, however, she was so ill that after due deliberation in consultation, Dr. Thomas induced abortion in order to save her life. I was not invited to take part in this consultation, as some of her friends were afraid that I should advise an operation. But the gentleman called in, knowing nothing of this little family secret, not only advised that the pregnancy should be at once terminated, but also that abdominal section should be adopted as soon as circumstances would permit.

On April 19th, 1894, she was admitted into St. Kilda House, and on the 21st I opened the abdomen, assisted by Dr. Thomas, Dr. Crago giving chloroform. The uterine fundus was flexed down to the pelvic floor, and had contracted firm adhesions with the rectum and sides of the pelvis. Both time and patience were necessary to separate the adhesions without injury to the rectum and surrounding structures. The ovaries and tubes were almost inseparably adherent to the pelvic floor and posterior vaginal wall at its upper third. The process of separation was most difficult, and could not be finally accomplished until the vaginal wall had been put on the stretch by the introduction of Dr. Thomas' hand. Ultimately the appendages were satisfactorily removed, the pelvic cavity cleared out, a glass drainage tube introduced, and the wound closed and dressed in the usual way.

On the evening of the 23rd pus was found in the drainage tube, implying that suppuration had taken place in the pelvis. On the following morning at 7.45 she was placed under chloroform and Douglas' pouch was freely opened, giving exit to a considerable quantity of pus, more or less offensive. The pelvic cavity was thoroughly irrigated, and a rubber drainage tube secured in the wound. The intra-pelvic irrigation was repeated three times daily for fifteen days (to May 11th), and as all discharge had now ceased, the wound in Douglas' pouch was allowed to close. Temperature: Morning 98, evening 99; pulse 96; no pelvic discomfort, appetite good, slept well, and appeared to be progressing satisfactorily.

May 16th, 9 a.m.—Had slept comfortably until 3 a.m., when she awoke with severe pain in the left shoulder joint, which she called rheumatism. The mouth and throat were inflamed and covered with white membranous patches like diphtheria, and the gums were soft and spongy. Temperature 102.4, pulse 98. Matters gradually improved until the 22nd, when the temperature

again went up suddenly to 102·6, and the pulse to 120. There was no longer any discomfort about the shoulder, and the mouth and throat appeared quite well; but there was some difficulty in breathing, which necessitated the extra support of several pillows. There was general dullness over the lower third of both lungs, with catching or stabbing pains during inspiration and fine crepitation over both sides of the chest. These facts pointed pretty certainly to double pneumonia.

By position, continuous linseed and opium jacket poulticing, fluid nourishment and stimulants, with full doses of quinine and careful nursing, she struggled on bravely until June 1st, when all her chest symptoms except a troublesome cough had subsided, the temperature having fallen from 103·4 to 97·6, and the pulse from 128 to 96. On the following day, however, a new difficulty appeared in the form of acute darting pains in the hepatic region. Her local pains soon became so intense as to be almost unbearable, and her courage utterly failed. Her appetite, which had hitherto so greatly sustained her, now suddenly disappeared, and her condition became more alarming than on any previous occasion.

From her intense suffering, the quick but powerless pulse, the sudden changes in temperature, and the severe localised pains, it was certain that suppuration was going on either in the liver or between that viscus and the parietal peritoneum, and, if not relieved, she must very soon succumb. She was again placed under chloroform, and, assisted by Dr. Thomas, I made an exploratory incision over the most prominent part, and quietly worked away until I struck a large sac of stinking pus on the surface of the liver. The cavity was carefully explored; well irrigated and packed with iodoform gauze, and a drainage tube. The temperature at once dropped to 97, and ranged between this point and the normal line to the end of the chapter, with one exception on the second day.

During the preceding seven weeks she had encountered many contingencies, which had severely tried her constitutional resources, and reduced her almost to a shadow. But now that she had turned the corner, her appetite became almost insatiable, she was always ready for food or stimulant, and could sleep soundly without any assistance; her spirits and courage again returned, so that she made flesh and gathered strength rapidly, and left St. Kilda nine weeks after the primary operation. On September 3rd she called at St. Kilda and reported herself as perfectly well and strong, without an ache or pain to her name.

Remarks.—As I have already so far exceeded my allotted time, I can only refer very briefly, and in general terms, to the clinical interest these cases severally represent. In Case 1, the inflammatory changes were so extensive and long continued as to suggest the ultimate annihilation of the menstrual function, and yet, after several months' quiescence, it reappeared both in time and duration as if nothing had happened. Implying that the ovaries and tubes had regained their normal functions and power, and suggesting the important truth that we should not be over-anxious to remove the appendages, even where suppuration has taken place, if the suppurating sac can be thoroughly drained, either through the uterus or the vaginal vault. I have seen several cases where this method has been followed by the best results. No case could possibly be less promising than this at one period of its course.

This case also bears witness to the good results which often follow abdominal section, in certain cases, even where nothing can possibly be removed. I have more than once thought that, if we could sometimes content ourselves with doing much less we might succeed much better. How often has pyo-salphinx, for instance, been positively diagnosed, and yet abdominal section has shown that no such disease existed? If this be the teaching of experience, why should we be so over-anxious to remove important organs we cannot replace, especially when we remember that such operative interference is not certain to be followed by a renewal of health. Then the complete closure of the intestinal fistula suggests how much Dame Nature can do, if we can but patiently wait and be content with giving her such assistance as lies within our sphere.

Then, Cases 2 and 3 teach the important lesson that abdominal section may be undertaken under the most unpromising circumstances, with a reasonable prospect of success, providing always that the whole of the morbid growth can be removed and the patient kept alive until the operation is completed. Moreover, Case 2 exemplifies the fact that a high temperature is not a necessary accompaniment of pus even when in excess, and Case 3 is suggestive from a diagnostic point of view. Case 4 is altogether unique in my personal experience, and withal so suggestive that any useful comment would necessarily embrace many points of interest, and occupy much time, which I cannot now command. I must therefore leave each one to gather for himself such lessons as its simple record may suggest to each individual mind. It is scarcely necessary to remind you that each case was more or less desperate when first brought under treatment.

A CASE OF SYMPHYSIOTOMY—
DEATH.

By ÆNEAS J. McDONNELL, M.B., Ch. M. (Syd.),
FELL. OBST. SOC. (LOND.), HON. SURGEON
TO THE TOOWOOMBA HOSPITAL, QUEENSLAND.

ON December 1st, at 11.30 a.m., I was called to see Mrs. H. According to her statement she had been in labour since 3 a.m. Afterwards I heard from a midwife who had been sent for, and had been unable to attend, that four days previously she had had pains rather severely.

She was a short and very stout woman, 5 para, *ætat.* 39, addicted to alcohol. At a hotel where she had been in service up to a few weeks before this (her husband being an invalid), I learnt subsequently that she was constantly drinking quietly. She gave a history of having had the first two children destroyed at birth, the third died immediately from injuries received, and the fourth was born alive, but very much bruised and torn.

The first thing that struck me was the markedly pendulous abdomen, spoken of by Playfair as characteristic of pelvic deformity.* On examining I found the head in the pelvis and a marked projection of the sacral prominence in which the head was jammed. The pains were good. I attempted the forceps gently, but found it impossible to lock the handles, and after a short trial desisted.

Craniotomy seemed out of the question; the house was old, very insanitary, the people were very dirty, and finally two cases of diphtheria, one fatal, had occurred within three months previously in the room she was in (the only available one). It seemed a case for operative interference, so I made arrangements for her immediate removal to the hospital, where the committee very kindly allowed me to take her (it being against the rules to admit confinement cases). At 2.30 p.m., assisted by Drs. Nolan and Park, the patient being under chloroform, we thoroughly cleansed the parts with 1-40 carbolic, shaved the pubes, and gave her a vaginal douche.

The forceps were again applied, but, as before, it was impossible to lock the handles. We decided, as the head was jammed, and the pelvis being otherwise normal, that a symphysiotomy would give enough room for the head to pass the obstruction. Being extremely stout, it was impossible to separate the symphysis subcutaneously, so placing the patient in the lithotomy position, and having passed a bougie into the urethra for safety, I cut down the bone; the bleeding was very free from a varicose condition of the veins of the part.

When I had cut down on to the bone, it was rather difficult to find the symphysis exactly at first, but when found I made a separation readily enough, keeping the forefinger of my left hand to push the urethra, with the bougie in it, slightly to one side. After some little trouble in cutting through the sub-pubic ligament, the bones separated. Getting Dr. Nolan to keep the hips well together to prevent too rapid opening, I removed the bougie and put the forcep on, and when the bones had separated about five centimetres, I was able to lift the head off the sacral prominence, and deliver the child, which was partly asphyxiated. Dr. Park at once took the child and performed artificial respiration, swinging and putting in hot and cold water. After about fifteen minutes it began to breathe. Meanwhile the uterus had been grasped and a hypodermic of 1-100 gr. of ergotin given. The placenta came away without any trouble; urethra was intact, bleeding rather free from the wounds. This was checked, and the parts dusted with iodoform, and silk worm-gut sutures inserted; then the bones being brought well into apposition by pressure on the hips, the stitches were tied, and a stout binder applied. The vagina was douched, and a rectal injection of brandy given. The patient, who was very low, was then put to bed. I had wished to wire the bones, but owing to her corpulence it seemed very difficult, and there was no time to be lost. For the same reasons I was unable to apply a plaster-of-paris bandage, so I intended to obtain a broad soft leather strap. The patient rallied fairly well after being put to bed; she seemed progressing for a few hours, and passed water naturally. However, in spite of all care and attention, she seemed to gradually go down hill, and died in thirty-six hours from exhaustion. The child had a very large depressed fracture of the parietal bone, and died in twenty-four hours in convulsions. I was unable to obtain a *p.m.*

REMARKS.—I regret that the first operation of this kind published in the columns of the *A. M. Gazette* should not have been successful. However, I think it right to publish this case, for these reasons, viz., I am not a believer in publishing successful cases only, but all cases of interest; and secondly, the majority of continental operators consider this operation as both easy and safe; their statistics are good, and we are told that this operation will come into general use.†

I feel rather ashamed at having to acknowledge defeat in the face of the cases we have from Pinard, Morisani, Spinelli and others.‡

However, the age of the patient, 39, may have had a bearing in the termination, and I certainly

* "Playfair's Midwifery," 6th Ed. Vol 2, p. 73.

† "A. M. G. Review of Pinard's Monograph," Dec. 1894.

‡ "Year Book of Treatment 1893," p. 356.

think that her alcoholic proclivities mitigated against success. As regards the operation itself, the *technique* is not difficult, and in a thin subject should be very easy. The chief danger seems rupture of the urethra; this can be avoided by a bougie in position, caution in cutting, and, above all in having one's assistant to firmly press together the hips to allow gentle and gradual separation.

As regards fixing the pelvis after operation, this is much harder than it appears in a stout subject, on whom the bandages may slip. Plaster would be extremely difficult to fix, and a broad soft leather belt, fastened with three or four buckles, seems to me most suitable. In a thin subject these objections would be of much less importance.

To sum up: In this case there was evidently a minor degree of contraction due to a deformity at the sacral prominence, owing to which she had lost three children previously; the head was jammed in this, and there was no possibility of delivering the child by forceps. She had been in labour for nominally nine hours, and the house was insanitary to the highest degree. Craniotomy therefore was out of the question. I was able to get her into the hospital and ensure antisepsis, skilled assistance and nursing. I think I was justified in operating.

Looking back on it, I cannot see that anything was omitted. Would a Cæsarean section have proved more successful?

I chose symphysiotomy because it has been so well spoken of, and as being so much safer to the mother, especially in cases of slight degrees of contraction. (*Vide* a paper by Lewers* on this.)

Dr. J. Murphy, president of the obstetrical section of the B.M. Association, 1893, states† that there is not as yet sufficient material to decide whether Cæsarean section, Porros operation, or symphysiotomy is the safest or most suitable for these cases.

Furthermore, he says: "I urge it with all the force I can master, that we are not now justified in destroying a living child."‡ If this be the case—and I feel very much of his opinion (except in instances in the bush, where one is unable to obtain any help—here there is no alternative)—the question arises, which operation is to be chosen? Has the experience of the last twelve months, since this was said, tended to throw any light on this vexed question? From what I can gather here, I think we must still wait for further cases, and remember that the operations done on the continent are done in hospitals. In Pinard's paper he speaks of a special symphysiotomy bed for

his cases.* Has it yet become the operation for the ordinary practitioner? and are we to find in it a safe substitute for the induction of premature labour? Can we do it unaided in the bush, with the comparative safety of the only resource at present—craniotomy?

To these questions the answer is certainly—No.

After all said and done, the induction of premature labour has proved very successful in the hands of British obstetricians, and I do not think that if we have the chance of doing it, we are justified in waiting to open the symphysis; if, however, one is only called into the case in labour, then in this operation we have another addition to our already long list of alternatives.

NOTES OF A CASE OF INTESTINAL OBSTRUCTION DUE TO IMPACTION OF FÆCES IN THE REGION OF THE CÆCUM, RELIEVED BY HYPODERMIC INJECTIONS OF MAGNESII SULPHAS.

By GEO REGINALD EAKINS, M.D., BRUX., SURGEON-MAJOR VICTORIAN RANGERS, OF ECHUCA, VICTORIA.

D.S., aged 54, had been under the care of another practitioner. When I was summoned in consultation on June 15th I was informed by the medical attendant that no movement of the bowels had taken place for some eight or ten days; that various cathartics and enemata had been tried without success; that he believed the obstruction was caused by malignant disease in the region of the ilio-cæcal valve; that the present treatment was hypodermics of morphia at varying intervals.

On making my own examination, I found the patient in a very weak state, vomiting frequently; temperature sub-normal; pulse 130, weak and thready; incessant thirst, and no sleep was obtained for past four nights. The abdomen was enormously distended; a pretty large tumour filled the lower and right side, solid on percussion, and very painful; the rest of the belly highly tympanitic. A catheter was passed by me, when, although the patient had been previously urinating, apparently at frequent intervals, a large quantity of urine was drawn off, much to the relief of the patient and the surprise of his medical attendant. Having already heard the opinion of my confrère, I ventured to disagree as to the malignancy, for the following reasons:—First: I had the same individual under my care for constipation, which

* "Lancet," Vol II, 1893, p. 300.

† B. M. J., Vol II, 1893, p. 464.

‡ *Ibid.*

* "Lancet," Vol II, 1893, p. 301.

was easily relieved by decreasing doses of Parke, Davis and Co.'s fluid extract of cascara sagrada. Second: There was no cachexia, no localised pain, and no wasting. And third, that the present attack came on as the result of excessive meat-eating, with no vegetables or fruit, for about a fortnight previous, the patient having been on the road driving some four or five hundred miles from a distant part of the colony. Fourth: Although vomiting everything taken, and with incessant hiccough, the vomited matter contained nothing faecal, or even approaching it. I suggested an ox-gall enema, to be given with an O'Beirne's long tube, to be followed with a copious injection of olive oil, with the patient in an inverted position; to stop the opium treatment, as well as the supply of all food and liquids by the mouth, and recommended the washing out of the stomach with warm boric-acid solution to prevent auto-digestion. The suggested treatment not being carried out by the then attendant, I was placed in the awkward position of having to take charge of the case on the night of the 17th June, when I found all the symptoms enumerated previously dangerously exaggerated, and my patient almost in a moribund condition. The catheter having again been passed with benefit, a hypodermic of magnes. sulph. grs. iiss in ten minims of sterilized water was injected into the arm; massage of the bowels tried, with warm cod liver oil as a lubricant, for half-an-hour; the stomach was washed out with warm boric solution; a second hypodermic, same strength, four hours later, with massage for another half-hour. The same treatment was given in another three hours, when large quantities of flatus and faecal matter were passed, and this within twelve hours from the giving of the first hypodermic. To relieve the awful thirst, the patient was allowed to rinse the mouth frequently with cold water, without swallowing any of it; a twentieth of a grain of muriate of pilocarpine was placed on the tongue about every two hours; this, with a small pebble kept constantly in the mouth, relieved the awful dryness of the mouth and throat. Sleep returned; teaspoonful doses of boiled water and diluted sterilized milk were allowed and retained every few hours, the patient's alarming condition rapidly improving. All pain and tympanites vanished, and bowels acting freely when I left on the 20th, to return to my own practice some fifty miles distant. Before leaving, great caution was enjoined about giving too much nourishment, which, however, was unfortunately disregarded on the evening of the 22nd, when half-a-pint of milk and a raw egg were given at one dose, which brought on

severe vomiting, the patient dying on the 23rd of the consequent collapse and the previous poisoning by the absorption of the toxic products imprisoned in the bowel, and too far removed from me for further opportune assistance.

The notes of this case are furnished to the readers of the *A.M.G.* for the purpose of proving the value of hypodermic catharsis, a method which I have found so often to procure movement of the bowels, as after abdominal operations, when nothing can be retained by the stomach, and rectal enemata or medication fails to give the relief so necessary to prevent adhesions and other complications. Dose always given by me, without any untoward effect, has been $2\frac{1}{2}$ grains in 10 minims of sterilized water, at intervals of two, three, or four hours, until proper alvine evacuations take place.

Echuca, 22nd December, 1894.

LEPROSY IN MADEIRA.*

By J. ASHBURTON THOMPSON, M.D., D.P.H.

DR. GOLDSCHMIDT, of Madeira, has forwarded me his lately-published volume, which gives an account of his personal observations during more than twenty-five years' experience of leprosy in that island. A brief description of the views of this uncompromising contagionist will probably be of general interest in Australia, where leprosy has been declared to be contagious by several and successive Acts of Parliament.

Origin of the Disease.—Dr. Goldschmidt begins at the beginning—almost. In his attempts to trace the commencement of lepra in Madeira, he was guided almost exclusively by Gasparo Fructuoso's "*As Saudades da Terra*," a MS. of the sixteenth century, which treats of the discovery of the islands composing the group, and their colonisation during the fifteenth century. The statements thus ascertained are the following:—Madeira was discovered in 1419, and was found to be inhabited. The island was used as a convict settlement by the Portuguese Government. Before the end of the fifteenth century—that is, after less than eighty-six years of foreign occupation—a lazaret was established in conformity with the usage then followed in Portugal, as in all other Christian countries. Among those who quitted their native land as criminals, or who for other reasons sought a refuge in a new country to reach which a dangerous sea had to be crossed, there must have been (*il se trouvait fatalement*)

**La Lèpre: Observations et expériences personnelles par le Docteur Jules Goldschmidt. Paris: Société d'Éditions Scientifiques, 1894.*

many lepers. Besides, the island colonists joined in the Holy War, and visited the north-west corner of Africa both to fight against Islamism and to procure the slaves who in that age formed the chief means of cultivating the soil. Now, the north-west corner of Africa harboured many lepers then, as it still does; and thus the fact of the direct introduction of leprosy to Madeira, and its persistence during four centuries, with all its essential characteristics unaltered, can be affirmed. (But nothing is said as to the state of the aborigines in respect of leprosy.)

Course.—At the beginning of the present century leprosy was very common in Madeira; during the latter half it much diminished. But it has never disappeared; on the contrary, it appears to Dr. Goldschmidt to have begun to increase again during the last thirty years, concurrently with a considerable increase of population, and a consequent greater difficulty of supporting life.

Prevalence.—Documentary evidence is available only from 1830. The number of lepers admitted to the lazaret at Funchal—the same referred to already, and the only one on the island—from that date to the end of 1890 was 224, and the average number for the twenty-two years, 1840 to 1861, was 24 new cases per annum.* From 1861 the annual number of new cases fell, and during the last fifteen years only two fresh cases were admitted. But this account does not represent the true state of the population (as, I venture to add, is almost always the case when official records are accepted without due reference to the conditions of compilation); for, while in older times poor lepers were forcibly removed from all the parishes of the island to the lazaret, during the past thirty years lepers have been perfectly free to enter or to leave it as they pleased. And farther, as regards both the completeness of the account of leprosy in Madeira furnished by this official lazaret-record, and also as regards the degree of isolation practised in older times, it is to be noted that lepers who were able to provide for themselves were always allowed to remain at home, though they were obliged to wear a distinctive dress themselves, and their relatives and servants were obliged to wear a square of yellow stuff on the breast. (Dr. Goldschmidt does not ascribe the increase of leprosy which he thinks has occurred during the last thirty years to relaxation of the laws just referred to, but, as already mentioned, to increased poverty, &c; but, at all events, his statements with regard to it seem to lack a desirable precision.)

Present Extent.—At the present date there are about 70 lepers in the island, or six per 10,000.

* Thus in the text; perhaps a typographical error for 24.

(The way in which this information was gathered is not stated.)

Geographical Distribution.—The area of the island is but about 484 square miles. It is interesting to note, therefore, that leprosy does not occur with equal intensity in all parts. It exists and even increases in some districts, while it decreases in others, and even disappears altogether from some of them. For instance, the village of Ponta do Sol and its environs has always (*de tous les temps*) been the locality most stricken; it has furnished nearly a third of all the cases admitted to the lazaret during sixty years past. Funchal, the capital, does not contribute more than a comparatively small number of cases to the statistics, (presumably, to the lazaret-record)—1.64 per 1,000 inhabitants, to 4.02 in Ponta do Sol. (This accords with what is known of lepra in all countries, though the example is not very striking. What is more important is to observe that incidence of disease, when it is inferred from hospital records, is very likely to be apparent only, or, in other words, is likely to be a measure of social prosperity, or of prejudice, or of anything rather than morbidity.) It is easy to show that leprosy persists and increases with insanitary conditions and *la misère*, and decreases and disappears with increased ease of circumstances and better sanitary conditions. Thus, the north of the island, which is the richer and the better cultivated, is nearly free, while the southerly portion continues to be infested. To the same conditions of greater poverty is to be ascribed the fact that the rural population, scattered though it is, yields more cases than the urban population. This constitutes an essential distinction between lepra and tuberculosis—diseases which otherwise have many points of resemblance. (But possibly the reader will be inclined to say, rather, that it may perhaps constitute such a distinction, when he remembers that we are but just beginning to see a little into the mechanism of infective processes; and the phenomena of symbiosis, as far as they are known, may stand to him for a warning against confident statements concerning all matters of this kind which as yet remain unmonstrated.)

Geological Formation.—The geological formation of the island is uniformly volcanic; of a basaltic structure, containing beds of trachyte and pumice. There are no sedimentary strata anywhere. The slopes are everywhere extremely steep, water rushes over them in torrents. Cultivable earth is furnished exclusively by

† This word is scarcely translatable; people who labour incessantly, and yet never earn enough to provide themselves with a full meal, live in *la misère*.

slow decomposition of the rock. Without going into farther detail, it may be said that the formation has no influence on the appearance and persistence of leprosy there. But where is the evidence that it has not as much influence on leprosy as on the appearance and persistence of forms of vegetable life?

Water.—Drinking-water is absolutely pure whenever it is drawn from a spring. But the physical conditions oblige to irrigation, which is effected everywhere by little canals or ditches, called *levadas*; and it is from the *levadas*, which receive all sorts of filth in their long and winding course, that drinking-water is generally taken. Dr. Goldschmidt has traced cases of typhoid fever along the whole course of some of these channels, and to them was due the explosive violence of the sole epidemic of cholera, which in 1856 occurred in this island. The body-linen of lepers is not disinfected; it is washed either in the mountain streams which feed the *levadas* or in the latter themselves. This may certainly contribute to spread lepra. (Thus, the author is a direct, or indirect, contagionist, following Professors Neisser and Leloir; later he lays more stress on direct contagion, or even relies on it exclusively.)

Altitude.—The greater the altitude the greater the incidence. But this is due to the poorer, dirtier, and generally rougher conditions of life among the mountaineers; these become more and more marked up to an altitude of 2,500 feet, above which no more dwellings are found.

Diet.—As for food, this seems to exercise no influence as far as quality is concerned. In general, the population is sober, and in the country drunkenness is unknown. Two-thirds of the population may be considered vegetarians, but wretched vegetarians who never have enough to satisfy their hunger; they live on cabbage, beans, maize, and sweet potatoes, and they eat a great quantity of bread. Little fish exists in the sea, and of that still less comes within reach of the poorer classes; a greater quantity of Norwegian and American dried fish is consumed, but even that is a luxury for the majority. Putrid fish is sometimes eaten; and there is one parish (Sao Gonsalves) which is known for this unclean habit, but in which the number of lepers yet is less than anywhere else. The peasants and lower classes of the urban population eat meat but once a year, namely at Christmas; then they gorge upon pork. But if the quality of the food is good enough and without influence, it is otherwise as regards quantity; hunger is permanently established on this island. Very early marriages, large families, a high density of population (170 per square kilometer), and the many parasitic

diseases against which agriculture constantly has to struggle, render it more and more difficult as time goes on for the peasant and labourer to support themselves; yet the population continues to increase, and thus a state of universal destitution is maintained. It is relieved only by the excellent climate, which permits of an open-air life all the year round. Under these conditions, hygiene is neglected, of course; do they not amply suffice to explain the persistence of the endemic, and its prevalence among the peasants and the poor?

Heredity.—The author pronounces himself against the influence of heredity, and thinks it more than probable that nothing but a predisposition is transmitted. He believes the disease is communicated in consequence of the close contact usual between parent and child. He adds: "Association between mother and child is more intimate than between father and child, and that explains how it happens that this false heredity is more often seen when the mother is the leper, than when the father alone is attacked." (A very important statement, to which precise and detailed observations could alone give weight, but these are wanting.)

Etiology.—Dr. Goldschmidt has vainly tried to find an etiology other than direct contagion, the inevitable consequence of a careless promiscuity, and of continued and close contact with the sick, operating among a puny and under-fed people; and he gives a few examples out of many cases known to him which prove that the people do not regard the disease as contagious—or, rather, behave towards it as though they thought it were not so. He denies any influence to mosquitos as carriers, and has never been able to find bacilli in the blood of those insects.

And thus the conclusion at which Dr. Goldschmidt arrives, he says, which is based exclusively on the clinical and epidemiological observations described above, is that, "having exhausted all the etiological probabilities, we can only admit direct transmission from one person to another through the *b. leprae*," as the means by which leprosy is maintained. (But in Australia we see clearly either that this explanation is impossible for want of direct and, as the author postulates above, intimate and prolonged contact; or else is insufficient, unless lepra be supposed much more easily communicable than the most sanguine direct-or-indirect contagionist ventures to allege, or universal facts leave possible. So far, Dr. Goldschmidt is in accord with Professor Leloir.) He proceeds to survey the distribution of lepra over the globe, and infers from well-known facts that it is not climatic nor telluric conditions, but social conditions which determine the decrease and disappearance as well as the extension

of endemic lepra. There is a constant correlation, he says, between the intensity of leprosy and the progress, or stagnation, or retrogression of civilisation. (Here then, he comes into more or less close accord with the conclusions of the Leprosy Commission, from which, for the rest, he differs in relying on direct communication.)

Prophylaxis.—This writer's scheme of prophylaxis is based upon the views which have now been described. But he first points out that countries range themselves naturally in four categories, thus:—Leprosy has often been introduced into certain countries, but has never taken root in them; some nations, on the other hand, have been invaded by lepra in modern times, and the disease has abundantly spread among them; thirdly, leprosy was common over vast continents in former times, from which it has disappeared almost completely now; and, lastly, in some countries lepra always has been endemic, and in them remains present and stationary at this day. Briefly, he recommends mere surveillance of the competent sick, and compulsory resort to refuges—he does not say “seclusion”—of the indigent sick, in countries where the disease shows no tendency to spread, or where it is diminishing; pitiless seclusion of all the sick, and surveillance of their families in countries where rapid extension is taking place; while better food and confinement of the sick to their villages is recommended for countries where the disease is stationary and widespread, as in India.

All this, which is described at greater length than can be represented here, flows more or less logically from the writer's view that leprosy is maintained by direct contagion among feeble people. I regret to note, however, that he accepts without question the belief that measures of surveillance have been the efficient means of reducing the prevalence of lepra in Norway, and seems to be unaware that the *datum* of the calculation (notwithstanding Carter's elaborate appreciation thereof) remains of very doubtful value. This, however, as being an error of judgment merely, is less likely to have a practically misleading effect than the purely mythic belief that compulsory, strict, and universal isolation of the sick has ever been enforced in Norway, which Professor Leloir seems to have entertained in 1886, as well as others at a more recent date. There is still one point to which I must draw attention. In describing his prophylactic measures, the author uses a phrase which, to my mind, stands in strong contrast with others in which he lays exclusive stress on direct communication. He says “as for

countries which have a natural immunity . . .” but how can a *country* possess either immunity or susceptibility since, as he says, telluric influences go for nothing? For myself, I welcome these words, be they a slip of the pen, or be they intended in another sense than that they seem to have. They keep in mind a view about which something, I think, still remains to be said; notwithstanding, by way of opinion, but by facts themselves.

Dr. Goldschmidt offers also some very interesting clinical observations and characteristic photographs, as well as an account of some ingenious experiments. I regret that limits of space prevent farther reference to them here, for they furnish food for reflection; and the more still that I feel the learned and amiable author may wonder how so long a notice of his work comes to be thought necessary, and yet contains so little of direct praise. But serious criticism is the best evidence of real importance; and thus I do not hesitate to conclude by showing how this observer (like most other contagionists) proves far too much by his reasoning.

Critical Summary.—He ascribes the maintenance of lepra to direct communication with the sick, operating among a people rendered anæmic and puny by chronic starvation. He says that about two-thirds (or about 80,000) of the total population may be regarded as wretched vegetarians who never earn enough to provide themselves with even vegetable food in quantity adequate to their physiological needs; and he shows that lepers are not at all feared, but that they keep their usual place in the family, &c., and outside it come into just such contact with their neighbours as the healthy do. Then he shows that leprosy has continuously existed on the island for about 400 years, and that adverse conditions of life and a bad hygienic state get progressively worse and worse; and yet he concludes by counting but 7 lepers in the whole island among a total population of nearly 120,000 at this present date!

The scientific interest and practical importance of this subject require the comment that the most liberal application of known facts concerning natural resistance would scarcely serve to patch so wide a rent as this.

December, 1894.

SIX CONSECUTIVE VAGINAL HYSTERECTOMIES FOR CANCER.

BY RALPH WORRELL, M.D., M. CH., HON. ASSISTANT SURGEON TO THE DEPARTMENT FOR WOMEN AT THE SYDNEY HOSPITAL.

SINCE January, 1892, I have done vaginal hysterectomy for malignant disease in the

following six cases:—(1.) Mrs. T., *æt.* 39. Multipara, seen by me two years previously when there was no sign of the disease. For the last three or four days has had gushes of hæmorrhage and constant white discharges. P.C. Well nourished, pale. Local examination disclosed an excavating cancerous ulcer of the cervix. Uterus movable. Operation in Miss Martin's Private Hospital, assisted by Dr. Hankins, in January, 1892. The disease was found to have extended through cervix into left parametrium. Uterus and appendages removed by ligating broad ligaments in sections and closing vaginal and peritoneal wounds by sutures. No drain. Recovery.

Recurrence or rather continuance of the disease, and death eleven months after operation.

(2.) Mrs. M., *æt.* 52. Multipara, menstruation has been profuse for three or four years past; lately flow has been a "flooding," lasting two weeks, and forcing her to remain in bed. Has much pain in back, hips and inguinal regions.

P.C. Rather stout, but very anæmic. Uterus very bulky, movable, os patulous, sound 3½ in.; much hæmorrhage. June 25, 1892, curetted and inject iodine, great quantity of granulation tissue brought away. October 19: Much flooding since the 17th, previous to which there had been no red flow since the curettage, but a profuse "mattery discharge" had been pretty constantly present. Curetted again. Endometrium very hard and irregular, especially on post and R. lateral wall; not so much granulation tissue as on last curetting.

October 31: Red flow having continued constantly since, I did vaginal hysterectomy in the Sydney Hospital in the same way as in previous case, except that, owing to adhesions, the appendages were removed separately and a gauze drain was passed into Douglass' pouch, the vault being closed by sutures on either side of it.

Easy recovery. Patient quite well at present time.

On section the uterine endometrium was found to be the seat of cancerous ulceration.

February 22nd, '93. Mrs. E. M., *æt.* 32. Multipara, menstruation profuse and too frequent.

P.C. Pale, fairly nourished. A soft, vascular papillary growth on post lip of vaginal portion. Slightly invading post vaginal wall and left fornix; uterus movable.

(3.) February 22. Removed the growth with sharp spoon, and applied thermo cautery.

February 27. Vaginal hysterectomy in the Sydney Hospital; parametrium invaded, and also post vaginal wall. Hæmorrhage difficult to control. Technique same, appendages removed with the uterus. No drain.

Easy recovery. Patient quite well a month ago.

(4.) Mrs. H. admitted into Sydney Hospital January, 1892, *æt.* 33, multipara. Has had pain in the womb and yellow discharge streaked with blood for the past nine months. Has been rapidly losing flesh for the last four months, almost constant vomiting lately and great increase of the abdominal pain.

P.C. Fairly nourished, very worn and anxious-looking. Moderate distension and much tenderness of the lower abdomen. Both legs slightly oedematous. The uterus reached half way to the umbilicus and was considerably fixed, its surface was irregular. The cervix was very large, encroaching in the fornices, its canal was patulous, and the seat of a cancerous growth which extended into the body. With the curette an immense quantity of broken-down tissue was removed. It was evident that the disease had spread beyond the uterus and set up a protecting peritonitis, and that consequently the case was quite unsuitable for operation; but when I told the patient that nothing more could be done for her, she pleaded so hard that I should give her a chance, however small, and not send her home to die, that I reluctantly consented to remove the uterus, more with the idea of relieving her mind than with any hope of curing the disease.

The operation was performed on February 3rd, '92. The organ had to be literally dug out of the surrounding adhesions, and it was impossible to tell when the peritoneal cavity had been opened or to make out the appendages owing to the fixation of the uterus. It was impossible to apply ligatures, and I was therefore obliged to use forcipressure.

She recovered from the operation, and returned to Inverell, where she died a few months later, having gained by the operation more relief and hope than I expected.

(5.) Mrs. R., *æt.* 43. Multipara. Has had continuous hæmorrhage for a month; previously menses normal. For about the same period has had considerable left inguinal pain and severe "bearing down."

P.C. Looks well. Uterus about normal size, mobility slightly impaired. Slight thickening in fornices. Cervix very short, flush with vault, and the seat of a hard, ragged, ulcerating growth, which is very vascular.

January, '94. In Sydney Hospital, vaginal hysterectomy; bladder dissected off with difficulty, appendages removed with uterus, Br. ligament ligated in sections. Stumps stitched in angles of wound. Gauze drain; peritoneal and vaginal

flaps united by suture. Easy recovery. Patient quite well at present time.

(6.) Miss R., *æt.* 17. This case has already been published in *extenso* in the *Australasian Medical Gazette* for September 15, '93. It was one in which the uterus was much enlarged, and both ovaries transformed into multilocular ovarian cysts the size of cocoanuts were successfully removed per vaginam. Dr. Wilkinson, Lecturer on Pathology at the Sydney University, has carefully examined the uterus, and has no doubt that the disease is malignant adenoma.

In this case the broad ligaments were secured by ligatures, a gauze drain was used, and the vaginal and peritoneal flaps sutured as usual.

An analysis of the cases shows the following facts:—All the patients have recovered from the operation. Their ages were 17, 32, 38, 39, 43, and 52. One was single, the others multipara.

The symptoms had existed for "several months" in two cases, four months in one case, nine months in one, eighteen months in one, and three years in one. Not much importance can, however, be attached to the statements of patients.

The disease was situated in the body of the uterus in three, in the cervix in two, and on the vaginal portion in one. In the last it tended to spread in the post vaginal wall, and in the two instances in which it originated in the cervix it extended towards the parametrium and up along the canal towards the uterine body.

As regards the operative technique, the ligature was used in five and the clamps in one, in which, owing to fixation of the uterus, ligatures could not be applied.

A gauze drain was used in four.

The peritoneal and vaginal flaps were brought together by sutures in all except that in which the clamps were used.

The disease recurred, or rather continued, and killed two patients, one in four and one in 11 months. Of the others, at the present time, one is 27 months without recurrence, one 23 months, one 21 months, and one 12 months.

To give a patient even only six months' immunity from a disease like cancer is, in my opinion, sufficient justification for an operation, the immediate mortality of which in competent hands is of from five to ten per cent. Many cases of 3, 4, 5, and even 10 years' immunity are on record. Some eight years ago in bringing before this branch a case of vaginal hysterectomy for cancer, I said: "I hoped in the near future, by early diagnosis and improved methods, we should so diminish the mortality of this operation, and improve its results, as to raise it to a foremost place in the triumphs of surgery." We have

already the improved methods and diminished mortality, but the early diagnosis is not yet. During the last eight or nine years I have seen scores of cases of cancer uteri, all with the exception of these six, and three others in which operation was refused, at a stage which put radical treatment out of the question. I should say not more than five or ten per cent. of the cases which come under notice are suitable for operation. Public, and indeed professional opinion, must be further educated before we can expect an improvement in this respect. It cannot come as long as the term "change of life" is held to be an adequate explanation for all hæmorrhages in elderly women. In my opinion, whatever be the age or condition of the patient, increased menstruation, irregular hæmorrhages, or unusual discharge, make local examination not only justifiable, but an imperative duty. The condition of these patients is so pitiable that we should allow no consideration whatever to interfere with the discovery of the disease, at a stage when we can deal with it effectually.

One more point. All will admit that the constant irritation to the everted lips of a lacerated cervix, by friction against the vaginal walls and during coition, is a potent exciting cause of cancer when the predisposition to the disease exists, and it therefore becomes our duty to advocate the restoration of the part to its natural condition directly the lesion is discovered.

SHORT EXTRACTS FROM CURRENT FOREIGN MEDICAL LITERATURE.

BY C. A. ALTMANN, M.B., F.R.C.S.E., PORT LINCOLN, SOUTH AUSTRALIA.

A SPECIAL FORM OF SYPHILITIC ANEURISM OF THE AORTA.

PROFESSORS BABES and Kalindéro (*La Roumanie Médicale*, September and October, 1894), from three observations of their own, and from cases recorded by others, claim to have demonstrated the existence of a special form of aneurism of the aorta occurring in young subjects tainted with syphilis, but otherwise healthy. These writers say that, beside the well-known syphilitic arteritis and the aortic aneurism due to this sclerotic arteritis, there exists a circumscribed aortic aneurism produced by the development of syphilitic gummata in the walls of the aorta, which have softened and become points of diminished resistance. Sometimes these gummata may cause ulceration of the internal tunic, and secondary infection by means of the microbes of suppuration. The aneurisms are small, spherical, and develop close to the origin of the aorta—generally on its concave side. They are sometimes accompanied by manifestly syphilitic lesions of the aorta and of the neighbouring organs. They have a tendency to early perforation. A histological examination of the walls of the aneurism shows the characteristic lesions of the small vessels.

ICHTHYOL IN GONORRHEA.

P. Colombini (*Les Nouveaux Remèdes*, October 24th, 1894), looks upon Ichthyol as the best remedy for the

treatment of genito-urinary affections due to blennorrhagia. He has employed it in 110 cases (80 males and 30 females). The males were treated with injections of an aqueous solution, varying in strength from one to four per cent., and the women by means of cotton tampons soaked in a ten-per-cent. solution of glycerole of ichthyol, and introduced into the vagina. The results were excellent. Of the men, 73 left the hospital completely cured, after periods of treatment varying from fifteen to thirty days. In only seven was the cure partial. All the women were cured, without exception. Before declaring his patients cured, the author confirmed the result by microscopic examination and by cultures, made after Wertheim's method.

Viletti (Boll. d. R. Acad. Med. d. Roma, 1884) also speaks favourably of the injection of a 3 per cent. solution in gonorrhœa. He says the gonococci perish rapidly, and inflammatory symptoms subside. Ichthyol does not cauterize the mucous membrane, and, consequently, there is no danger of subsequent stricture from its use. It, moreover, possesses analgeric properties.

THE TREATMENT OF HÆMORRHOIDS BY THE INJECTION OF A SOLUTION OF IODOFORM IN ETHER.

Beck (*Gazette de Gynécologie*, November 1st, 1894), having noticed the rapid retrogression of cystic tumours, &c., when injected with iodoform dissolved in ether, was induced to try its effects on eight cases of hæmorrhoids, and the results were excellent. The following is his method:—

The rectum having been rendered thoroughly aseptic by repeated irrigations with a solution of salicylic acid, a suppository containing ten centigs. of cocaine, and one ctgr. of morphia is introduced about a quarter of an hour before the operation. If this fails to render the parts sufficiently anæsthetic, a few drops of a one-per-cent. solution of cocaine may be injected at different points into the mucous membrane; but this is not desirable, and rarely necessary. A tampon of iodoform gauze is now introduced rather high up by means of a small speculum, and the hæmorrhoids are brought down and exposed—but not by means of forceps. Two drops of a saturated solution of iodoform in ether are then injected into the cellular tissue surrounding each nodule. As the result of this injection, cicatricial tissue forms, and the perivenous tissue retracts. If the cocaine suppository above-mentioned is used, the pain caused by the injection is very slight, and quickly disappears. After the operation, the tampon of gauze is replaced by a suppository containing one decigramme of salicylic acid, and opium and bismuth are given to keep the bowels closed.

On the third day an enema is given, as well as a purgative by the mouth, and constipation must be carefully guarded against for the next few weeks. The operation does not prevent the patient from following his usual occupation. The author has never observed any bad after-effects, such as abscess, ulceration, embolism, hæmorrhage, stricture, or fistula, and in his cases the relief was permanent. If the hæmorrhoids do not completely disappear after one operation, a second injection is sufficient to complete the cure. The following are the advantages of this operation:—

1. It can be performed without the aid of an assistant.
2. Iodoform, being an energetic antiseptic, prevents suppuration and infection, and its action is different from that of carbolic acid, which, being in these cases employed only in a concentrated form, acts as a caustic.
3. The nodules themselves not being interfered with, but only the tissue surrounding them, embolism, which is so apt to follow carbolic acid injections, need not be feared here.

4. No retraction occurs, as in cases of extirpation by the thermo-cautery.

5. The patient can go back to his occupation immediately after the operation.

THE HYPNOTIC ACTION OF TRIONAL.

M. Vogt (*Les Nouveaux Remèdes*, Nov. 8, '94) has arrived at the following conclusions concerning the action of trional as a hypnotic.

1. Trional is preferable to its congener sulfonal; it acts more promptly, and produces a calm sleep, and normal awakening.

2. A single dose of 1 gramme to 1.50 grms. is taken at bedtime dissolved in a hot drink. If the drug taken for two nights in succession produces only a slight effect it is useless to continue it.

3. Its administration should be stopped after five or six days, and thus all danger of poisoning is avoided. This period is, moreover, usually sufficient to cure the patient from his insomnia.

4. During the treatment it is always expedient to reduce the acidity of the urine by giving two or three daily doses of bi-carb. of soda.

5. Constipation, which is apt to occur, must be guarded against, in order to avoid accumulation due to defective elimination.

PROCEEDINGS OF BRANCHES.

SPECIAL NOTICE TO MEMBERS OF THE NEW SOUTH WALES, SOUTH AUSTRALIAN, AND VICTORIAN BRANCHES.

The Australasian Medical Gazette is supplied to all Members of the above Branches Free of Cost. After the delivery of the March Issue, however, no member whose subscription to his branch for the current year remains unpaid shall be supplied with any further copies of the Gazette until the said subscription shall have been paid. The respective councils do not hold themselves responsible for the supply of back numbers which under this rule may have been undelivered.

Subscriptions should be forwarded to the respective branch treasurers as below —

New South Wales, Dr. Clubbe, College-st., Hyde Park, Sydney; South Australia, Dr. T. W. Corbin, King William-st., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE 124th general meeting of the branch was held on Friday, 7th December, 1894, at the Royal Society's Room. Present: Dr. Crago (President), Drs. Worrall, Fiaschi, Chisholm, Thring, J. A. Dick, Tidswell, Clubbe, Jenkins, Hankins, Angel Money, E. Fairfax Ross, Mullins, Thomas, Barkas, G. A. Marshall, Schrader, Furnival, Stuart, Sydney Jones, Quaife, Jas. McLeod, M. A. Gill, Todd, Harrison, Chambers, Langhorne, Collins, Jamieson, Wright, Abbott, Neill, Lloyd, Bennet, McCulloch, Armstrong, Pockley, Gordon McLeod, Cummings, Scot Skirving, Clay, Cummings-Smith, Huxtable, Morgan-Martin, Leitchfield, Collingwood, Blackwood.

The minutes of the previous meeting were read and confirmed.

The following new members were announced by the President:—

Drs. A. Andrews, Albury; J. Colpe, Sydney; F. G. Connor, Lismore; A. E. Cox, Forbes; R. F. Ferguson,

Newcastle; W. Fox, Narandera; T. A. Green, Marrickville; H. E. Lee, Gunnedah; H. L. Maitland, Sydney; Thos. Matthews, Nowra; John Morton, Camden; R. McKillop, Goulburn; Chas. Patrick, Marrickville; H. R. H. Peare, Leichhardt; Walter Spencer, Enmore; G. P. Stanley, Blackheath; S. H. Schrader, Sans Souci; W. H. Tibbitts, Gunning; Harry Tresidder, Dubbo; Caleb Terry, Kiama; T. Wood Lee, Wollongong; J. Ashburton Thompson, Sydney; Chas. H. Maher, Burwood; W. Gordon Cumming Smith, Ryde.

The hon. secretary read letters from Dr. Odillo Maher, Dr. Sydney Jones, and Dr. C. J. Weekes acknowledging letters of sympathy from the Branch.

The following correspondence concerning Dr. T. A. Green was read relative to a certain paragraph appearing in the *Weekly Review*—

November 12th, 1894.

Dr. T. A. Green, Dulwich Hill.

Sir,—The attention of the Council of this branch of the B. M. Association has been drawn to a paragraph appearing in the *Weekly Review*, published at Marrickville, on Saturday, 20th October, 1894. As the Council have decided to bring under the notice of the branch all medical advertisements and laudatory notices of an unprofessional character, I have been directed to write to you on the subject, and to request that you will be so good as to forward, for the information of the Council, any explanation you may wish to make in connection with the matter.—Yours, etc.,

L. R. HUXTABLE,

Hon. Secretary.

'Canonbury,' Marrickville Road.

Dulwich Hill, 15th Nov., 1894.

Dr. L. RALSTON HUXTABLE,

Hon. Secretary B.M. Association.

Dear Sir,—Yours of 12th inst. to hand. The explanation I have to offer regarding the *very* unprofessional notice in which my name appears, is that the whole thing was put in by some ignorant quasi friend without my knowledge. I notified this in the next issue of the paper in which it appeared. The first I knew of it was when I read it, and no one could have been more annoyed than I was. I did not even know who had been so officious in using my own as well as other members' names without permission until three days after the paper was issued. Then I found out by chance. I very deeply regret such an occurrence, as it can do nothing but harm to a professional man. I am, myself, a man who looks down upon anything unprofessional. I sincerely trust that this letter will somewhat undo the harm that the paragraph must have done me professionally.

I am, yours faithfully,

TERENCE A. GREEN.

Letter from the Secretary of the Faculty of Physicians and Surgeons of Glasgow re Dr. Elmslie's advertisements was read.

Letter of apology from Dr. W. C. Wilkinson for his absence from the meeting and his inability to read his paper.

Dr. CLUBBE read some notes on a case of operation for abscess of brain. The patient was exhibited.

INCORPORATION OF THE BRANCH.

Dr. HUXTABLE proposed that the council be empowered to take all the necessary steps to registration of the branch under the Companies Act. He said: I rise to move on behalf of the council that, "The council be empowered to take all steps necessary to the incorporation of the branch under the Companies Act." During the five months which have elapsed since I had, in June, the honour to move the adoption of the

report of the council on the question of the purchase of the *A.M.G.*, very important developments have occurred, to which it is necessary that I should allude, in attempting to explain, as I am now called upon to do, our present position with respect to this important matter—developments which have culminated in the resolution which I have now to submit to this meeting.

It may perhaps be remembered that in moving the adoption of that report I made it my first duty to point out certain risks, which in the opinion of the council were inseparable from any such undertaking as the proposed purchase, and it may further be within the recollection of members that the first risk insisted upon was the financial one.

Now, one of the most important and gratifying developments which have occurred since that period in connection with this matter, and which has resulted in the removal, or at any rate the minimising of this primary risk, has been the growth of a fund which was originated at the time of that meeting, and for which we are indebted to the prudence and foresight of Dr. Faithfull—a fund which has come to be called the "Gazette Fund," but which, it seems to me, we might very appropriately term the "Faithfull Fund." From small beginnings this fund has now, I am happy to say, reached beyond our most sanguine expectations when it was instituted, and has now attained the very handsome total of £350. The importance of this announcement will be realised when it is added that this sum will enable us to make the first payment, on account of the purchase, of £750 to Mr. Bruck without incurring one penny of debt, and will, moreover, leave us a substantial balance to our credit wherewith to begin the new year. And this fund has a value beyond even that of its component pounds, shillings, and pence. It has a special value as being a substantial and undeniable expression of the genuine sympathy and interest felt in our branch and its work by so large a number of our members, and it has, moreover, that value which is always associated with good example.

It is a fund in connection with which I hope the name of its founder, our excellent friend Dr. Faithfull, will always be remembered by this branch with grateful feelings.

The creation of this fund, which is to be regarded as a loan to the branch on interminable debenture without interest, has not only relieved us of the necessity of incurring a debt to the bank, but it has relieved the branch of interest which would have been payable for an overdraft and which we estimated in our report at £28 per annum.

But since the date of that report, developments of an equally gratifying character have been going on in yet another direction. The stream of new members which set in in the earlier part of the year, the result as we believe of the adoption of a more active policy than hitherto on the part of the council, has continued. Our membership at that time numbered 240; it to day numbers 280. And thus our financial position to-day is stronger than it was at that time (end of June) to the extent of no less than £70 per annum, viz., £28 of interest saved, and £42 subscriptions of new members.

But developments of a still more significant and almost un hoped-for character have been going on outside the immediate circle of our own branch with respect to this matter of the *Gazette*. When moving the adoption of the report, I had the opportunity on behalf of the council of stating that we had good grounds for believing that two of the other colonial branches—South Australia and Queensland—would join us in making the *Gazette* the journal of the Australian branches of

the B.M.A., but we were obliged to confess that we had but small hopes of Victoria co-operating. Well, it is a matter of congratulation for us all that our elder sister branch, Victoria, has shown a disposition to treat us in this business with a "sweet reasonableness" which few of us were generous enough to give her credit for. It gives me the greatest pleasure to be able to announce that the council of that branch appears to be willing to waive its long claim to have the publication of any federal journal of the Australasian branches fixed in Melbourne, and to recommend, with a view to the general good, that the Victoria branch will join us in the *Gazette*.

There seems every probability, therefore, that the *Gazette*, from the time it comes into our possession, will be issued as the journal of the Australasian branches of the B.M.A., and this is the nearest approach to medical federation of the colonies that has yet been dreamed of, and the importance of it to the profession at large has, I think, been as yet realised by but few of us.

And so by the generosity of members we have got the needful money. We have got all we dared to hope for in attracting new members to our branch. We have got more than the most sanguine of us ventured to think of as possible in the co-operation of the sister branches, and there now remains the final and formal step to be made, in order to put us in a position to take possession of the *Gazette*—a step which may be justly regarded as a fitting conclusion to our year's work.

It is hardly necessary to explain that such incorporation is essential in order to limit the liability of individual members of the branch in a manner impossible by any other means.

Now, in view of the facts which I have just laid before the meeting, it does not appear necessary to enter into any arguments in support of the general policy of the council, nor of this special portion of its policy. These facts speak, and speak eloquently, for themselves as to the general soundness of that progressive policy. The striking progress which was made during the year we are now closing, may well be a matter for congratulation for the council, as well as for members generally. But we would not have it supposed that the council arrogates to itself an undue share of credit on account of this advancement. The Council feels that this advancement has been possible only by the existence of proper *esprit* amongst the profession at large, the reality of which has long been doubted and even scoffed at. There has been a curious heresy within our own ranks as to our progression in Australasia. It has consisted in the fallacy of regarding the profession here as an inanimate, soulless, unresponsive thing—a being from which it was hopeless to expect any approach to intelligent co-operation, even in its own obvious interests. The result of the past year's developments have been to utterly expose the fallacy of this view. The result has been to prove beyond all shadow of a doubt that our profession, in this colony at least, is, on the contrary, a body sensible and intelligent, capable of generous feelings and possessed of a soul capable, when properly appealed to, of nobly responding. I trust, sir, that the resolution will be adopted, and adopted with absolute unanimity.

Dr. FIASCHI seconded the resolution.

Drs. QUAIFF, E. FAIRFAX ROSS, KENDALL, and Professor STUART, discussed the question of the liability of individual members.

Dr. HUXTABLE replied that a legal opinion had been obtained to the effect that the only liability of the members was the same as the Home Association, namely, one guinea for each member. This opinion had also been repeated by the solicitor to Dr. Crago and himself.

The resolution was then put by the President, and carried.

Dr. CLUBBE read the following paper :—

ON THE DIAGNOSIS OF DIPHTHERIA.

By C. P. B. CLUBBE, L.R.C.P., LOND.,
M.R.C.S.E., Hon. Asst. Surg. PRINCE
ALFRED HOSPITAL, AND Hon. SURGEON
SYDNEY CHILDREN'S HOSPITAL.

I THINK I had better premise by saying that all those who have given any attention to the subject and are entitled to speak with authority on it, agree that the bacillus called the Klebs-Loeffler bacillus is the cause and origin of all true diphtheria.

Sternberg, in his "Manual of Bacteriology," with reference to this bacillus, says :—

"1st. It is found in all undoubted cases of diphtheria. In support of this we have the results of the researches made by Loeffler, Wyssokowitsch, D'Espine, Kolisko, Paltauf, Zarinko, and Sorensen, who in nearly every case have demonstrated without difficulty the presence of this bacillus.

"2ndly. The Klebs-Loeffler bacillus is found only in Diphtheria.

"3rdly. As shown in Loeffler's earlier researches, pure cultures of this bacillus induce characteristic diphtheric inflammation."

Dillon Brown, of New York, in his article on diphtheria in "Starr's American Text-Book of the Diseases of Children," says :—

"True Diphtheria is the product of the Klebs-Loeffler bacillus either alone or associated with other bacteria. The characteristic feature of the disease is the pseudo membrane. There are pseudo membranous inflammations that are not diphtheria; but, excluding the chronic cases, and those due to great heat, as a scald and the application of an intense irritant, it is often impossible to distinguish between true and false diphtheria, except by a bacteriological examination. The only positive test is the presence of the Klebs-Loeffler bacillus, either alone or associated with staphylococci or other bacteria. Clinically cases of follicular amygdalitis are frequently diagnosed as cases of simple catarrhal or purulent inflammations when they are really diphtheritic."

Formerly the presence of a fibrinous exudation or false membrane in the throat was considered proof positive of diphtheria, and the absence of such membrane was also considered a proof that there was no diphtheria. Now we know that it is quite possible to have a fibrinous exudation in the throat without any

Klebs-Loeffler bacilli being in it, and therefore without diphtheria. There are cases, on the other hand, in which there is no true membrane to be seen, and yet in a cultivation made from a swabbing from the throat we may possibly get an almost pure culture of the Klebs-Loeffler bacilli, and these cases, therefore, in spite of the absence of the classical signs, must be considered diphtheria. It is only since bacteriology came to our aid that it has been possible in all cases to accurately diagnose diphtheria.

Jonathan Hutchinson, when visiting the Hampstead Fever Hospital in 1891, asked Dr. Gayton if he had made any distinction between croup and diphtheria. "None whatever," was his reply, "it seems impossible to diagnose them."

The following occurs in the "Catechism of Surgery," in Vol. IV. of Hutchinson's "Archives of Surgery":—"Do you regard the production of membranes as essential to the diagnosis of diphtheria or croup?"

"By no means. The free production of membranes or casts depends upon the proclivities of the individual patient. Age, for instance, may influence it. During epidemics of croup different cases vary exceedingly as regards the abundance of membranous effusion, and a certain number of even fatal cases are always witnessed in which no membrane whatever is found. Diphtheritis, or pellicular inflammation, although a common and conspicuous feature in most cases of diphtheria or croup, is not an essential one."

And further on he says:

"The simple fact is that you cannot, by a single symptom, nor by any group of symptoms, distinguish croup from diphtheria, or either or both of them from catarrhal sore throat, or from hospital sore throat. It is absurd to allow the severity of the case to become an element in its diagnosis. Infantile laryngitis may at any time run on into the most typical croup; in fact, the latter is usually preceded by a stage which takes rank under the former name. The difference is one mainly of degree of severity. It is the same with hospital sore throat and the patchy tonsil. You cannot diagnose them from diphtheria because they are simply its minor forms."

By the word croup I fancy Mr. Hutchinson means a membranous laryngitis. It would be very much better, and would simplify matters very much, if we as medical men could discard the word croup altogether. Of course, the word will continue to be used by the laity.

Very little help is afforded by reference to the various text-books on the subject of diagnosis. Nearly all authorities tell you that in all marked

cases there ought to be no difficulty in coming to a correct diagnosis at once, but there are cases in which a diagnosis is often impossible.

Ashby and Wright, in the article on diphtheria in their "Diseases of Children," say:—

"In many cases clinical distinctions may entirely fail us, it being uncertain whether the case in question is one of mild diphtheria or not. We may be entirely dependent for a diagnosis on the detection of *D. bacillus* in the membrane or secretions."

In order that you may not think that I am exaggerating the difficulties of diagnosis, let us for a moment consider the differential diagnosis between follicular or membranous tonsillitis and diphtheria.

In each there may be an initial rigor, followed by a rise of temperature from 102 to 104. In each there may be pain and difficulty in swallowing, and the lymphatics at angles of jaw may be swollen and tender. The tonsils may be found red and swollen.

Then in the exudation stage of tonsillitis we see whitish or yellowish points projecting, or liquid oozing from one or more lacunar orifices on the tonsils. This alone might make some men certain that they were dealing with tonsillitis, especially if these points could be easily brushed off with a swab.

But what if these grayish, white, pultaceous masses which block the mouths of the overloaded crypts coalesce, and form distinct patches of false membrane, as they often do in tonsillitis. Suppose you see the patient for the first time at this stage, how are you, without a bacteriological examination, to say the patches of membrane that you see on the tonsil are not true diphtheria?

Then, again, even if the little points on the tonsil remain distinct, you must bear in mind that you may be dealing with a case of Lacunar Diphtheria, which is described by Koplik in the *New York Medical Journal*, March 10th, 1894. He gives a detailed account of several cases; I will read you one.

"Tonsils are swollen and red, there is no membrane, the lacunæ contains a soft yellow substance, which can be removed like a plug. The whole picture is one of common amygdalitis. Temperature is so slight that it was not taken. No glandular enlargements. Child in the best of spirits and condition. The examination of the plug from the lacuna showed Loeffler bacillus virulent in bouillon culture 48 hours old, in dose of 0.5 c c, to guinea-pigs."

Follicular tonsillitis, it is true, generally clears up in a few days, and so may a mild case of diphtheria. What may help us, and what I suppose does generally guide most of us, is the severity of

the onset in tonsillitis and the quick cessation of all acute symptoms. But when it is necessary to make an absolutely certain diagnosis we must obtain a cultivation from the throat and see if there are any Klebs-Loeffler bacilli.

Cases of diphtheria that began in the trachea and larynx are not infrequent, and these cases are often mistaken for simple croup. By croup I mean a laryngitis, in children, with or without a certain amount of swelling and spasm. In such cases there is absolutely nothing to be seen in the throat. The child is "croupy," and gets attacks of dyspnoea lasting for various periods. How is a diagnosis to be made without a cultivation? A swabbing taken from the fauces, on which there is no membrane to be seen, will, in cases of laryngeal diphtheria yield a typical growth in twelve hours.

NASAL DIPHTHERIA.—This is often overlooked, because in these cases, also in the initial stage, the throat is often free from membrane. The discharge from the nose is thin, and often there is very little membrane to be seen even on careful inspection of the fauces. I feel sure that such cases are a fertile source of the spread of the disease. The cases are always serious and often fatal. Their early recognition is most important.

Diphtheria may, and often does, follow scarlet fever. It is sometimes not recognised at once, because after the first few days in scarlet fever there may not be any great attention paid to the throat. These cases are very difficult to deal with, because they cannot be treated at a diphtheria hospital unless there happens to be a separate ward for them. Diphtheria occasionally follows Measles, the condition of the throat in this disease, as in scarlet fever, favoring the growth of the Klebs-Loeffler bacillus. The laryngitis that sometimes ushers in an attack of measles is sometimes mistaken for diphtheria, and the children are sent off in hot haste to the Diphtheria Hospital, at great risk to their lives. In all these conditions the only way of making a certain diagnosis is to examine bacteriologically.

There are cases of sore throat which are not really diphtheria, in which there is distinct membrane to be seen on the tonsils and soft palate. In some of them the constitutional disturbance is slight, but the symptoms may be very severe at the onset.

In America these cases seem to be much more common than they are here, and they are called by Parke and others pseudo-diphtheria. In cultivations strepto and other cocci were found, but

not Klebs-Loeffler bacilli. Parke reports 117 such cases with one death.

Henoch, referring probably to the same class of cases, says: "That white or gray fragments of false membrane consisting of amorphous fibrin pus corpuscles and epithelium occasionally occur on the tonsils or on the arch of the palate even in simple sore throat. In several children suffering from this kind of sore throat he has seen the apex or one border of the uvula covered with a greyish white coating. "These," he says, "are cases of regular croup of the mucous membrane of the pharynx. They have nothing in common with diphtheria excepting the mere superficial appearance and are of purely inflammatory origin, and as he has frequently observed to be the case in adults, they may be with abscesses of the tonsils. Under these circumstances you will always do well to defer your judgment as to the nature of the disease for 24 to 36 hours, to isolate the patient for a time from other children, and to observe the further course of the case carefully. At any rate, very many cases are put down off-hand by superficial observers as diphtheria, which are nothing but severe cases of catarrhal sore throat." And he adds: "The wonderful results of many physicians who say they have cured almost every case of diphtheria with chlorate of potash and other drugs are really to be explained in this way."

These, too, doubtless, are the class of cases referred to by Roux and Gersin when they say:—"Doctors skilled in the diseases of children often now regard as diphtheritic and send to the special (diphtheria) ward children who have not that disease. There is no need to insist on the danger to which one exposes their children in placing them with their sore throats in a diphtheria ward. In relying on the classical signs alone such mistakes cannot be avoided. One will continue to fail to recognise true diphtheritic sore throat, and take for such sore throats that are not diphtheritic. The introduction into practice of the means we advocate (bacteriological diagnosis) will greatly lessen the number of such errors. To-day every medical man ought to be as firmly convinced that the presence of the bacillus of Klebs and Loeffler in the false membranes is characteristic of diphtheria, even as the bacillus of Koch in the sputum is characteristic of Pulmonary Tuberculosis.

Loeffler, in his original communication, 1884, pointed out the necessity of bacteriological observation in order to differentiate diphtheria from other throat affections which are clinically indistinguishable from it.

In his report to the recent Buda Pest Congress,

1894, after remarking "that there is no longer any dispute as to the etiological relation of the bacillus to diphtheria," he again emphasises the necessity of bacteriological diagnosis: "Not infrequently," he says, "cases appear in the early stages to the clinical observer as true diphtheria, which, however, are caused by other micro-organisms. The differential diagnosis can be established by bacteriological research. Every case suspected to be diphtheria must be bacteriologically investigated."

At the same Congress Professor Roux stated "that at least a quarter of the children admitted to the diphtheria wards of the Paris Hospital are not suffering from diphtheria. Of a series of 448 cases which he examined, 128 had not diphtheria; in another series of 80, 19 had no diphtheria."

From all this evidence, then, it is quite clear that the diagnosis of diphtheria in a large number of cases is quite impossible without the aid of bacteriology.

The well-marked cases there is no difficulty about, but the majority of cases are not well-marked in the first instance. It is wrong and does much harm, and causes a great amount of unnecessary alarm and anxiety to call a simple sore throat diphtheria, when it is not so. And it is very wrong indeed, and may cause loss of life, to overlook a case of diphtheria. Our only safeguard is to look for the Klebs-Loeffler bacillus in all doubtful cases.

It was because we recognised the immense importance of accurate diagnosis in all these cases that we arranged for a bacteriological laboratory when the new Diphtheria Cottage was being established. This has recently been enlarged. The method we pursue (and have been pursuing since July, 1893) is this: A swabbing is taken and a cultivation made from the throats of all children that are brought to the Diphtheria Hospital, and this is done before they are admitted to the ward in order to eliminate the possible error of the serum being innoculated from the air of the ward. I will not detain you with a description of the preparation of the serum tubes and the sterilised swabs, or with the method of staining, mounting, and examining under the microscope the growth that is found in these tubes after they have been in the incubator for twelve hours. All those interested in the matter, if they do not already know all about it, can find full details in any text-book on bacteriology.

At various times complaints have been made because occasionally children who have been sent to the diphtheria ward with a certificate from a medical man stating that they were suffering from Diphtheria have been refused admission.

From the facts I have placed before you I think

you will see how necessary it is to be extremely cautious about admitting doubtful cases. Before a case is admitted we want to make quite sure that it really is Diphtheria. This is most important for the child's sake. And secondly, we want to make quite sure that it is not suffering from any other infectious disease, such as Measles, Scarlet Fever or Whooping Cough, for the sake of the children that are in the hospital. These diseases are apt to do a great deal of harm if contracted by children already weakened by diphtheria. Indeed, when the ward was first opened we had a very sad experience in this respect. Several children who were getting better after tracheotomy got Scarlet Fever and died.

If the case is not urgent and we are doubtful as to its nature, we make a cultivation and send the child home again, telling the relatives to enquire the next day the result of the bacteriological examination. If Klebs-Loeffler is found, the child is admitted; if not, it must remain at home.

It would simplify matters and save children being taken about in public vehicles if medical men in doubtful cases would send to the hospital for two tubes. One containing the sterilised swab, the other the solidified serum. They could then make a cultivation, send the tubes back to the hospital with the name of the child, and in twelve hours' time they would get a report by telephone if they made enquiry. In making these cultivations it is necessary not to take a swabbing soon after the application of an antiseptic to the throat, or the result may be negative.

It behoves medical men to be very careful indeed, for their own sakes, before certifying that a child has diphtheria and recommending its admission to the Diphtheria hospital; and this was brought home to one medical man in a very unpleasant manner. This gentleman was asked to see a child. It had croup with urgent dyspnoea, and he diagnosed it as diphtheria, and sent it to the diphtheria hospital. (This was soon after the hospital was opened, and the House Surgeon admitted the child on the doctor's recommendation.)

It was subsequently discovered that the child was not suffering from diphtheria, so it was discharged in a few days. The father of the child, I believe, threatened the doctor with an action for damages for exposing his child to the risk of Diphtheria.

Many of you, no doubt, noticed in the *British Medical Journal* for August 18 of this year, an important communication from Dr. H. Biggs, of New York, at the annual meeting of the British Medical Association, on the subject of Diphtheria. He explained that the bacteriological division of the Health Department

in New York supplied all medical men as they required them with two tubes (exactly like those you see here now). After the medical man has made the cultivation in the usual way, the tubes are sent back to the central laboratory and put into the incubator, and in twelve hours a written report of the result of the microscopical examination of the growth is sent to the medical practitioner, and if the case proves to be Diphtheria, to the health officer of the district. When we have in Sydney—as I believe and hope we shall have in the near future—a bacteriological laboratory in connection with the Health Department, no doubt a somewhat similar plan will be pursued here; and then, if there is a compulsory notification of infectious diseases in force, all suspicious cases of sore throat will have to be reported and a swabbing from the throat examined by the Government Bacteriologist. One effect will be to very much lessen the spread of diphtheria. Another will be to very much lessen the number of cases of Diphtheria that are now said to occur in the practices of some medical men.

I do not wish to convey, by anything I have said in this paper, that it is impossible to diagnose Diphtheria without the aid of bacteriology. In malignant and well-marked cases the diagnosis is simple to any one who is acquainted with the disease. Even in doubtful cases, if it is not important to make a diagnosis at once, as the case progresses symptoms may arise that will dispel all doubt.

What I wish to convey is this: That in a very large number of cases no absolutely accurate diagnosis can be arrived at unless a cultivation is made.

Then, of course, for statistics, if the records are to be of any value at all for the purposes of comparison, and especially in cases treated with the anti-toxine serum, it will be necessary that in every case the diagnosis shall be confirmed by a bacteriological examination.

Dr. CRAGO said his experience was that diphtheria was not so common in general practice as it used to be. He desired to mention a case which had been spoken of at one of the branch meetings by Dr. Chenhall, so that Dr. Clubbe could explain the matter. It appeared that a child had been taken to the hospital, and had not been seen by the Medical Superintendent. The matron had taken a swabbing, and the child was sent home. Two days after, the child was again presented and admitted. There was no doubt it was a very great difficulty at times to diagnose these cases.

Dr. QUATFE said he had only a few words to say. He quite agreed with Dr. Clubbe's remarks on the difficulties of diagnosis. He remembered a very severe epidemic of diphtheria in the Woollahra district. One particular case had a very bad sore throat, but no signs of diphtheria; but as diphtheria was prevalent at the time he (Dr. Quatfe) treated the case as one of diphtheria. The importance of taking the steps foreshadowed by Dr. Clubbe cannot too strongly be stated.

If the Board of Health could not do anything in this matter, the Government should be approached and should be asked to take up the matter of dealing with this question of having a laboratory under the Board of Health for the purpose of diagnosing infectious diseases, and so save a great deal of trouble and annoyance to both patient and practitioner.

Professor STUART said that every step had been taken to bring about all that could be desired in this matter, and a report on infectious diseases was at the present time in the hands of Mr. Reid, and a bill is now being prepared by the Parliamentary draftsman with this end in view. At the present time there was the nucleus of a laboratory at the Board of Health, and he sincerely hoped that it would soon be in proper working order.

Dr. SCOT-SKIRVING said there were two questions he would like to ask Dr. Clubbe: first, whether it was easy and certain to find the diphtheritic membrane; and secondly, whether or not a condition known as herpes of the throat did not simulate diphtheria.

Dr. CLUBBE, in reply, said that in the case mentioned by the President, he had made inquiries about it, and found that the child was presented at the hospital, and, as the Medical Superintendent was absent in town, he was telephoned to and asked what should be done. He instructed the matron to take a swabbing and send the child home. This was done, and upon examination it was found that there was no membrane apparent. Two days afterwards the child was again presented and admitted. It was discharged from the hospital, and died a fortnight afterwards in a fit of convulsions. It will be seen that we must be very careful in admitting children, as there are only two wards, and these are always full of acute cases. If there is any doubt, we must send the child home, as we have no observation ward. With reference to Dr. Scot-Skirving's question, as to whether it was easy or certain to identify the diphtheritic membrane, he (Dr. Clubbe) thought that a certain amount of skill was requisite in examining the bacilli, and it was by no means an easy matter. He had seen cases of herpes of the throat, as mentioned by Dr. Scot-Skirving, and would always advise a proper examination in every case before deciding finally upon the diagnosis. He (Dr. Clubbe) could not sit down without thanking Dr. Tidswell for his work at the diphtheria wards. He had taught more accurate methods in dealing with these examinations, and certainly deserved the hearty thanks of the profession.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE annual general meeting of the branch was held in the Austral Salon on Wednesday, December 19th, at 8 p.m. The President (Dr. F. Meyer) occupied the chair, and there were also present: Drs. Harbinson, Hamilton, Miller, McAdam, Henry, Gresswell, Noyes, Rosenblum, Molloy, Thomson (J.R.M.), Kent-Hughes, Cutts, Fishbourne, Hooper, Sawrey, Martell, O'Sullivan, Joske, Snowball, Springthorpe, Kenny, Hamilton-Kenny, Mullen, Neild, Gray, Stawell, Lynch, Syme, and Scantlebury.

The HONORARY SECRETARY, Dr. Mullen, read a letter received that day from the hon. secretary of the Sydney branch in respect to the proposed union of the branches in the *Australasian Medical Gazette*, and practically conceding what the Branch had conceived as conditions precedent to such amalgamation. He

stated that the Council, acting upon the resolutions agreed upon at the special general meeting held on December 12th, (at which more than forty members of the branch were present), had joined the other branches upon the terms already announced. The announcement was received with applause.

The minutes of the last annual meeting were read and confirmed.

The HONORARY SECRETARY next read the Council's report.

COUNCIL'S REPORT.

The Council for the year 1894 has the honour to report as follows to the members of the branch:—

During the year fifteen new members have been elected, but resignations, deaths, and erasures under the rules exceed that number by ten, so that the membership now stands at 194. The Council has followed its predecessors in determining upon having as financial a list as possible. There are also seven honorary members.

The Council has to record with regret the decease of Dr. James Anderson, and Dr. Waldemar Roeckel.

During the year there have been eleven ordinary meetings of the branch and one special meeting to consider proposals from the Sydney branch *re* the *Australasian Medical Gazette*.

The Council has met fourteen times. The attendances were as follow:—

The President, 13; the Vice-President (sometimes residing out of town), 6; Dr. Gresswell, 7; Dr. Neild, 6; Dr. Springthorpe, 10; Dr. Henry, 12; Dr. McAdam, 11; Mr. A. L. Kenny (Hon. Treas.), 10; Dr. Molloy, 8; Dr. Mullen (Hon. Sec), 14.

During the year the honorary secretary has been in communication with Dr. McWilliams, of Perth, and has assisted him in the preliminary steps necessary to ensure the formation of a branch of the Association in Western Australia. Your Council hopes that their successors will be able to announce next year that every colony possesses a branch of the British Medical Association, Western Australia being the only colony unattached at present.

The Council has continued its attitude towards unregistered practitioners. During the year £100 was received for penalties and costs, but the expenses came to £17 over that sum. When it is remembered that the Medical Defence Union of Great Britain expended last year £247 in prosecutions, and got in only £52, it will be seen that the results are very satisfactory. The branch will be strengthened in its attitude to quackery, by the position into which the Home Association is being placed by the English members. Many papers have been published on the matter in the *British Medical Journal*. The Parliamentary Bills Committee has gone fully into the question; several branches have by resolution called on the Association to suppress unqualified practice, declaring that they want practical benefits, as much as, or more than scientific, and the General Council of the Association has gone so far as to publish a special request to members to send in certain details with regard to any quacks in their districts. In Great Britain and her colonies, the Government have never sought to enforce the Medical Acts, but have always left them to the profession, so that any hope of Government action is visionary. The question of unqualified practice in legal matters is left entirely to the Law Institute as representing the legal profession, which, instead of apathetically standing by and calling in vain for Government aid, is quietly and continuously at work. An evil such as unqualified practice which has been the unhindered growth of years cannot be suddenly suppressed; continuous action is necessary if the present good results are to be of any benefit. As an

instance of the work done, one noted quack left Melbourne immediately he found the Act would be enforced against him. All the so-called Chinese doctors have altered their titles; one of them who was fined £20 has not set foot in Melbourne since. In one case—the question of the title of certificated midwife—the decision of the Court was against the views of your Council's barrister, on the ground that a midwife was merely a monthly nurse. The judge held that the title was no offence. Inasmuch as every dictionary defines a midwife as an accoucheur, as one who attends confinements, or as one who assists a woman in childbirth, it is difficult to understand the decision, but the law allowed no appeal. Further steps may be taken in a similar matter. The question is one of very great importance. In England, so powerful have the midwives become, that they are demanding registration with a right to practice, and members may have noted some six months ago repeated references to the registration of midwives in the *British Medical Journal*. But the most important case was one in which the Supreme Court decided that the Medical Act prohibited any person practising medicine unless he is registered. It is well not to hurriedly follow up the results of this decision.

The Council, in conjunction with the Pharmacy Board and the Pharmaceutical Society of Australasia, devoted considerable attention to the invitation of the General Medical Council of Education and Registration in respect to the proposals for the revision of the British Pharmacopoeia, and as a result made a series of recommendations which have been favourably commented upon by the Home authorities.

A proposal made by the Melbourne Medical Association to form a Medical Defence Association, to defend members from blackmailing actions for alleged malpractice, was taken up by your Council after the branch had expressed approval thereon. A few weeks time should see the Association duly formed and registered. The Medical Society of Victoria also acted on the joint committee.

During the year the question of more satisfactory arrangements in regard to the publication, etc., of the transactions of the branch, has been under the consideration of the Council. At the invitation of the Sydney branch, negotiations were entered upon, which had for their aim the practical federation of all the Australian branches, and their official representation in the *Australasian Medical Gazette* upon terms of equality. The sanction of the branch was subject to certain conditions, obtained at a special general meeting held on Dec. 12, and the Council have now the pleasure of announcing the acceptance of these conditions, and the consequent entrance of this branch into the now accomplished federation. The Council congratulate the Branch, and the profession upon the successful consummation of this most desirable project, which they regard as at once the necessary antecedent to adequate influence and prosperity, and the proof that Australian medicine is now worthy of national, rather than provincial recognition. They congratulate, also, the Sydney branch upon the enterprise, the fairness, and the conciliatory attitude which have characterised their communications, and which have indeed precipitated the union that all desired, but none hoped to see so soon accomplished. Following on the completion of the above arrangements, the Council at its last meeting elected Dr. Springthorpe as local editor for the ensuing twelve months.

The Council records with regret the retirement from their numbers of Drs. Neild and Henry. This voluntary withdrawal on their part after long years of valued

service to the branch is made by them with the object of promoting the admission of new members into the governing body.

Upon the motion of Dr. FISHBOURNE, seconded by Dr. O'SULLIVAN, the Report was adopted. Both

speakers specially congratulated the Branch upon the practical federation of the branches under the new publishing arrangements.

The Honorary Treasurer (Dr. Kenny) then read his Financial Statement.

Statement of Receipts and Expenditure, 19th December, 1893, to 19th December, 1894, inclusive :—

[illegible]

Some figures are introduced from Report for 1893 for comparison. Report for 1893 shewed receipt of £110s. interest on deposit in Melbourne Savings Bank. This was not drawn, and should not have been so entered. Further, the Union Bank pass-book at date of that Report shews a credit balance of £11 8s. 8d., and not £12 18s. 8d. as entered. In preparing the Report for 1894, the correct amount at current account credit for 1893 is shewn. The amount deposited at the Melbourne Savings Bank was £150, which, with accumulated interest (£5 11s. 9d.), was withdrawn when the Government reduced the rate of interest, and was invested as a fixed deposit for one year at 4 per centum per annum with the Union Bank of Australia, Limited, Melbourne. This will be available on April 4th. 1895.

A large number of arrears of subscription were collected in 1893. A number of members have not yet paid their subscriptions for 1894, hence the marked difference in the amounts opposite subscriptions.

Re Law charges. A cheque for 12s. 6d. was drawn and paid on 21st December, '93, but has not been presented to the bank. This amount has not been entered in above statement.

Stillwell and Company's account for the latter half of the year 1894 had not reached me when preparing this statement.

Of the balance to credit of current account in the Union Bank of Australia, £45 3s. is due to the British Medical Association, £32 15s. 8d. being the amount actually at the disposal of the Branch.

Subscriptions received to date :—

				£	s.	d.
For the year	1892 ...	1	...	1	11	6
"	1893 ...	4	...	6	6	0
"	1894 ...	132	...	208	2	0
"	1895 ...	2	..	3	3	0
				<hr/>		
				219	2	6

Subscriptions due at date :—

For the year 1891 ...	1 ...	1 11 6
" 1892 ...	6½ ...	10 4 9
" 1893 ...	19 ...	29 18 6
" 1894 ...	67½ ...	106 16 9
		<hr/> 2148 11 6

Of these, the following are bad :—

For the year 1891 ...	1 ...	1 11 6
" 1892 ...	8 ...	4 14 6
" 1893 ...	5 ...	7 17 6
" 1894 ...	5 ...	7 17 6
		<hr/> £22 1 0

Good debts	...	...	...	...	£126 10 6
Due to British Medical Association (on these debts)			...	...	84 0 0
Balance	...	...	...	...	£42 10 6

Outstanding Liabilities—Accounts not presented :—

By Honorary Treasurer—

„ Exchange on Cheques ...	£0 14 0	
„ Petty Postage ...	0 11 4	
	<u> </u>	£1 5 4

By Hon. Secretary's Expenses—Latter

half 1894	...	...	...	1 10 0
" Rent of Salon	...	...	...	9 0 0
" Stillwell and Co.	...	...	...	33 17 6
				<u>£45 12 10</u>

Statement of Assets and Liabilities, 19th December, 1894.

Assets—

Fixed Deposit Union Bank	£155	11	9
Interest at 4 per cent., April, '95	6	4	5½
Credit Balance Current Account, Union Bank	77	18	8
Good Debts—Subscriptions	126	10	6
	<u>£366</u>	5	4½

Liabilities—		
As per list	45	12 10
British Medical Association	45	3 0
British Medical Association, on good debts	84	0 0
		— £174 15 10

Excess of Assets over Liabilities ... £191 9 6½

Certain articles of office furniture, &c., not included.
AUGUSTUS LEO KENNY, M.B., B.S.,
Honorary Treasurer.

Upon the motion of Dr. HOOPER, seconded by Dr. HAMILTON, the Report was adopted.

Dr. HOOPER noted the ability of the Treasurer's Statement, and the modest sum for which so much anti-quackery work had been accomplished.

Dr. HAMILTON suggested that it would be interesting and useful if, in future, the balance-sheet could be circulated prior to the meeting.

Dr. HENRY thought that it would be appropriate to acknowledge the valuable work done by the Secretary and Treasurer during the year. Dr. Kenny was an ideal Treasurer, and Dr. Mullen possessed not only the ability and energy of former secretaries, but had, in addition, the legal knowledge which had proved of so much value in minimising quackery. He proposed, accordingly, a special vote of thanks to the retiring Secretary and Treasurer.

Dr. GRESSWELL seconded, with much pleasure. Their services were clearly shewn in the reports just read.

The motion was carried with acclamation.

The PRESIDENT then declared the following to be the Council for the year 1895:—Drs. Meyer, Snowball, Gresswell, Springthorpe, Kenny, Mullen, McAdam, Molloy, O'Sullivan, and Stirling.

The new Council retired to elect its office-bearers. On returning, the retiring President announced that Dr. Snowball had been elected President, Dr. O'Sullivan Vice-President, Dr. McAdam Treasurer, and Dr. Mullen Secretary. In introducing the President elect, he congratulated the Branch upon having obtained as President one so well-known and respected as Dr. Snowball.

Dr. SNOWBALL took the chair, amidst cheers. He warmly thanked the Branch upon the honor done him, and promised to do his best to live up to the standard set by his esteemed predecessor. He called upon Dr. Meyer to read his address.

Dr. MEYER, who was received with applause, spoke as follows:—

PRESIDENT'S ADDRESS.

MR. PRESIDENT AND GENTLEMEN,—In bringing to a conclusion my term of office, permit me to express my grateful thanks for the privilege I have enjoyed at your hands during the past twelve months, a privilege rendered all the more pleasurable by the kindly consideration that you have throughout that period extended to me.

To the members of the Council I feel gratefully indebted for the courteous support they have always accorded me, and to our invaluable Secretary, Dr. Mullen, I am sincerely thankful for the many ways in which his untiring energy and ever-ready assistance have combined to make my office as President a very light burden to carry. Outside of the Council, the members of a large branch like ours can hardly realise

how much the welfare of their Society depends on the capability and willingness of the Secretary, and it seems here both fair and fitting to acknowledge, in terms of the highest appreciation, the enthusiasm, ability, and tact which Dr. Mullen has brought to bear on what has been to him a year of very arduous honorary duty.

The report of the Hon. Treasurer is the best comment that can be offered on the text of his quality, and Dr. Kenny is to be congratulated on being in a position to give such an excellent account of the genuinely flourishing state of the Branch.

The report of the Council shows that the work done at our monthly meetings has been of a particularly useful and instructive nature. The discussions on the various papers read have been keen, and if criticism has at times been trenchant, our proceedings have ever been harmonious, and I think it will be conceded that we have conserved both our ethics and our ambition that a high-water mark should be maintained in the interchange of our medical ideas.

During the year, I regret to say, death has removed two of our members—Dr. James Anderson and Dr. Waldemar Roedel. The former was not often seen at our meetings; he belonged to the type of the hard-working, duty-loving, general practitioner, and was much esteemed and respected in his own district. Dr. Roedel was a gentleman of sound scientific attainments. An able exponent of orthopaedic surgery, he was for several years Surgeon to the National Orthopaedic Hospital in London. He was an enthusiast in his speciality, and his untimely loss will be felt, not only by those members of the Branch who found interest and instruction in his contributions to our meetings, but by another circle who, outside of his professional character, knew him as a man of varied and brilliant qualities and amiable disposition.

The decision of Dr. Neild to withdraw from the Council at the end of the year was taken advantage of by the Branch some time back, as you are aware, to make him the recipient of a testimonial, embodying the deep feeling of esteem in which he has so long been held by us. Identified as he has been with the Branch from its inception, keenly alive and loyal as he has ever shown himself to its interests, his absence from the Council table will be genuinely felt; but in taking his well-earned rest, he will have the satisfaction of knowing that his experience and mature judgment have had a valuable influence in fostering the objects for which this Branch was originally founded.

For reasons similar to those of Dr. Neild, Dr. Henry has also voluntarily withdrawn from candidature for the Council. Practically the founder of the Branch, he has watched with unswerving devotion its passage over the shoals and shallows of infantile life to the development of its present healthy and vigorous adulthood; and, with a natural feeling of pleasure and pride, is content to sail along with it on what promises to be a calm sea and a prosperous voyage.

In our President-elect, the Branch is to be congratulated on its choice of a gentleman whose name is a household word among the profession for eminence in special and general knowledge, and under the Presidency of Dr. Snowball, I safely augur for our Society a continuance of its prosperity and sphere of usefulness.

In taking a brief glance at the progress of medical knowledge during the past year, the continued advance of Bacteriology stands out as a prominent feature. Alike in the physiological and pathological processes of natural phenomena, we recognise the agency of microscopic germs. To their activity on the one hand are

due the succession of crops, the production of beer, wine, alcohol, even the flavouring of tea and coffee, and the aroma of tobacco; while on the other, cholera, influenza, and plague, at one time inscrutable mysteries, are now established beyond a doubt as microbic in their origin. Following in this trend of thought, it would seem that the bacteriologist will, in the near future, find almost every form of disease associated with, if not directly attributable to, some kind of germ activity. Under what circumstances reducible to exact law the normal germ-life of the healthy human organism becomes the abnormal germ activity of disease, and how far the pendulum may in time swing back in the direction of regarding what we now call causes as effects, are problems of speculation, which, for their answer, may be left to the evolution of bacteriology. It is something indeed that, in the present day, bacteriology has not only a practical application in the prevention of many infectious diseases, but a recognised place also in the field of therapeutics. Omitting pneumonia, tetanus, typhoid and other diseases in which results so far have been confined to a small number of experimentalists, let me briefly direct your attention to the influence of bacteriology upon two diseases, more feared perhaps by us than any other—tuberculosis and diphtheria.

It is now four years since Koch's sensational discovery of tuberculin. As a curative agent it has not come up to expectation, though there is much in the contention that expectations were absurdly high, and that the drug itself was used generally in excessive doses, and in unsuitable cases; and there is an increasing body of evidence that, when confined to early cases, and given in small doses, it is not only free from risk, but of very great value. But, as a diagnostic agent, much more can be said of it. Thus, to quote from a recent utterance of Sims Woodhead, Director of the Laboratories of the Royal College of Physicians and Surgeons, *Lancet*, Oct 27, 1894, p. 960:—"If Koch's tuberculin had done far more harm than it ever has done, the saving of human life indirectly through its efficacy as a diagnostic agent will be so enormous that the account to the credit side of the balance will have to be reckoned, not as hundreds to units, but as thousands." In this connection, it is only fair to mention with high approval the continued efforts of one of our own members to place this important question upon its proper footing. His series of six papers, five of which were written during the period of public distrust and professional abandonment, embody an amount of observation and research rare in our local experience, and form a very satisfactory Australian contribution to the literature of this great subject.

As regards diphtheria, the immediate outlook is even more promising, because we have to deal with a sharp crisis in a person otherwise healthy, and attacked by one pathogenic organism only. The steps in the discovery of the present antidote are suggestive. First, Loeffler and Klebs isolated the bacillus, and showed it to be the cause of the disease; then Roux and Yersin separated the toxin which caused the symptoms and constituted the danger; next, Behring found that he could give immunity to certain animals against this toxin; and finally, the same observer showed that the blood-serum from such immune animal is the antidote to the disease even in man. The crucial test of actual trial has already shown a remarkable reduction in the mortality from diphtheria under the antitoxin treatment. Successful cases, admitting of no doubt, are being numerously reported in the English and foreign medical journals, and as a result of the wide-spreading wave of enthusiasm in England and on the Continent,

funds are being actively raised for the acquiring or the manufacture of this valuable therapeutic agent, the British Institute of Preventive Medicine alone, through the appeal of Sir Joseph Lister, having already received £500 of the £2,000 it requires for the adequate preparation of the antitoxin serum. On the Continent, special laboratories are being endowed for this purpose, and in view of such a gain as this and similar ones almost incalculable, it may well be asked, "how much longer will this community have to wait for the appointment of a Government bacteriologist, competent to deal with these matters of life and death, and provided with the means necessary for effective action?"

The results of "serum therapeutics" throw a suggestive light upon the *rationalité* of that universally successful inoculation—vaccination. Cow-pox is but small-pox modified by passage through the cow, just as diphtheria antitoxin is the modified product of the diphtheria bacillus passed through the horse, and tetanus antitoxin that which has been passed through the dog. It seems almost as if science had decided to offer to those enthusiastic mal-observers who will not be convinced by the statistics and facts of vaccination, the additional argument of scientific basis and analogy.

Coming nearer home, our interest in another deadly enemy, snake-poison, has been recently revived by the publication of Professor Halford's little book on "Thoughts, Observations, and Experiments on the Action of Snake Venom on the Blood." Professor Halford is to be heartily congratulated on the confirmation which his results of thirty years ago have received at the hands of such an able investigator as Dr. C. J. Martin, Demonstrator of Physiology in the University of Sydney, viz., that snake venom is a blood poison, and acts primarily on the blood corpuscles, destroying their normal physiological action. The astonishing results which have been obtained by Dr. Calmette, of the Pasteur Institute, from experiments on the action of chloride of lime in the case of rabbits and other animals inoculated with snake venom, may be taken as an indication of the possibility that this dreaded poison has at last found its antidote. So far, Dr. Calmette's experiments have been confined to the lower animals; but quite recently, a case has been reported in our midst of the successful application of the chloride of lime treatment to a human being. In this snake-infested country, as indeed universally, such an antidote will be hailed as a priceless blessing. The further development of the subject will be watched with keen interest, and in the meantime it will be noted with satisfaction that Professor Halford is continuing his investigations towards the confirmation of Dr. Calmette's results, and in the determination of the minimum lethal doses of the venom, and the quantification of the antidote.

The present aspect of Gynæcology, compared with that of some thirty or forty years ago, offers such a striking contrast as must give deep satisfaction, not only to him who practises this branch of the profession as a legitimate speciality, but also to the general practitioner who must often have trusting recourse to the specialist in those cases where something more than general measures is indicated as indispensable to the restoration of the balance of health. And the gynæcologist, if he is to be successful, must be also a physician in the true sense of the term. If he make a virtue of his ignorance of the general laws of pathology, he is liable to find in the abnormal condition of a woman's special organs, the *fons et origo* of a woman's total unhealthiness, to the exclusion of the consideration of general pathological conditions, which may be, as they so very often are, primary causes of which the unhealthy generative system of a woman is a natural effect

Following on this disregard of general considerations, a misguided enthusiasm for the surgical attack of women's ailments has from time to time not only caused a depreciation of the value of the gynecologist in the eyes of the general practitioner, but has constituted him in the lay mind—that of suffering womanhood—a *monstrum et horrendum*, with the result that not infrequently the conscientious suggestion of operative measures as absolutely necessary is received by the patient with coldness and distrust, if not altogether rejected. And no wonder! when so many oöphorectomies, curettages, and operations on the cervix have been followed by so many negative results. The failure in many cases to relieve pain and other neuroses by these and kindred operations is due, not so much to want of care in the performance of the so-called special operation, as to the fact that the primary causes are in many instances to be found in the cerebro-spinal system, or, as before stated, in general pathologic conditions of the system other than uterine. But conversely, it must be remembered that uterine or ovarian disease is often the primary cause of grave nervous disorder—the “longings” of pregnancy, the puerperal mania that is often contingent on puerperal toxæmia, the neuroses associated with menstruation, the disturbance of mental equilibrium that is a common accompaniment of the climacteric period—all these and many others are evidence of the wonderful interdependence that exists between the special organs of woman and her nervous system, a relation so complex as to more than justify the epigrammatic statement, “that a woman is an organism round about a uterus.” It is this very complexity which leads the best of us into mistaking cause for effect, or *vice versa*. Still, seeing what remarkable changes are effected in the nervous functions of woman by changes in her special organs, it would perhaps lead to much light being thrown on many cases of female lunacy, if the observations of the resident medical officers of our asylums were supplemented by the results of carefully-conducted examinations at the hands of recognised authorities on the diseases of women. Moreover, gynecological rest has long become hopefully recognised as a potent factor in the curative treatment of many of the special diseases of women—a luxury to be indulged in by the woman in easy circumstances—unfortunately denied to her poorer hard-working sister.

Happily the gynecology of to-day, while widening in its scope, is becoming more and more conservative in its application. Modern gynecology may be said to have dated from the invention of Marion Sims' speculum, of which it has been justly remarked—“that it has been to diseases of the womb, what the printing press is to civilisation, what the compass is to the mariner, what steam is to navigation, what the telescope is to astronomy.”

In proof of the statement that the field of gynecology is growing wider, it is sufficient to mention the teachings of Emmett and Lawson Tait. It is now twenty years since Emmett introduced his operation for laceration and ectropium of the cervix, a distinct stimulus to the surgery of this part, which has developed valuable modifications of technique in the operations of Schröder, Simon-Markwald, Sängner, and others. That Emmett's operation is one of the most valuable in gynecological practice has been abundantly proved, but unfortunately its excessive mis-application and incorrect method of performance have done much to bring it into disrepute. If Emmett has stimulated the surgery of the cervix, so also in a great degree has Lawson Tait advanced our knowledge of the surgery of the uterine appendages, and placed the pathology of pelvic inflammations on a much more satisfactory footing.

In the direction of conservatism, one must hail with satisfaction such a paper (which it was my privilege to listen to) as was read by Professor Pozzi, of Paris, to the Gynecological Section of the Annual Congress of the British Medical Association, held at Newcastle-on-Tyne last year, on “The Conservative Treatment of the Uterine Appendages.” Though the number of cases which he has brought forward as successful results of resection and ignipuncture of the unhealthy ovary are, as he himself admits, hardly yet sufficient to establish this method of treatment on a firm basis, he has shown indisputably that it is not necessary to remove the whole of an ovary partially diseased, as has hitherto been the practice, and the fact that pregnancy has followed in the case of a woman whose ovaries were “conservatively” treated by him, demands that this novel and delicate surgery, supported as it has been by the happy results of Martin, of Berlin, and others, should claim the earnest attention of gynecologists.

The treatment of certain forms of uterine deviation has been, during the last ten years, completely revolutionised by the surgery of the round ligaments, and the operation of hysteropexy. The fame and glory of the gynecologist must, in the present day, be cradled in something more convincing than his name-bearing pessary, and while in certain shapes pessaries will continue to be useful adjuncts to these radical forms of treatment, it is not too much to say that the funeral pyre, for the greater part of them at least, is being slowly but surely heaped.

The surgical treatment of the graver forms of uterine disease, malignant and fibroid growths, is undergoing an evolution that makes for definiteness and safety. Having regard to the rapid growth of cancer of the uterus, the consensus of opinion is now in favour of complete hysterectomy at the earliest declaration of the disease in any part of the organ, doubtful clinical evidence on this point being set at rest by the microscope.

While the etiology of the great bulk of the special ailments of women is only too clear, the methods best adapted to their prevention are, unfortunately, not so easily brought within our grasp. It is safe, I think, to say that women suffer more, or more readily lapse into ill health, than men; and it is equally safe to say that habit and fashion, with their unnaturalising and enervating effects, the product of our nineteenth century civilisation, have in certain classes largely to do with this condition of things. Not that man does not pay the penalty under the same influences, but he is not subject to them in the same degree, and to him abused nature grants a later day of reckoning. This is no pessimism, but in truth, the experience of every medical man who has to deal with the ailments of women.

For this part at least of the etiology of women's disease there can be much prevention. The growing girl, educated in the simple elements of anatomy, physiology, and hygiene, can be taught to emancipate herself from the hurtful slavery of much that is fashionable in dress and custom, without the possible danger of developing a three-volume novel, or a fibroid tumour; and the “newer woman,” like the music of the future, may, not by revolution, but by natural evolution, equal, if not excel, the best type of the past, and so become

“A perfect woman, nobly planned
To warn, to comfort, and command.”

The newer woman, however tempting as the subject of a disquisition, is one that I cannot here allow myself the privilege of discussing. Indeed, at the outset, I should find a difficulty in accurately defining the species. But all curiosities in Nature attract for the time being more notice than the normal types, and the

newer woman is no exception. If her leading characteristic is to be her "mannishness," then by the law of compensation we may expect the "newer man" to become, *pari passu*, "womanish." To those who desire the welfare of woman and her share in "the higher education," whatever that may mean, it may be pointed out that, when all the evidence is taken, the process of reproduction is found to be almost antagonistic to the development of nervous tissue. The structural differences between the sexes have been intensified with succeeding ages, the most important being the larger brain capacity of man than woman, especially his superior development of the frontal lobes—the seat of the highest intellectual faculties, and his inferior development of the occipital lobes, the seat of sentiment, which are much more developed in woman; and that being so, if the idea that mental development is of more importance than physical were to spread, so as to include woman as well as man, there would be reason for fearing that the human race would degenerate. With a healthy nervous system, and either as a cause or consequence, a healthy bodily function, women may be safely left to determine for themselves the limits of their "sphere," and the solution of the involved problems of their higher education, the female franchise, and the mayoral potentialities of their sisters in Maoriland.

Before leaving the subject of the etiology of the diseases of women, here very briefly outlined, there should be mentioned one element in the production of the physical troubles of women which cannot be too strongly emphasised as largely preventible. It is had enough that so many women should have to pass through the ordeal of childbirth, handicapped by hereditary disadvantages, faulty development and general unpreparedness of the system for the storm of parturition. But how much greater the evil when, as is too often the case, meddlesome midwifery comes in to increase the terrible price that so many women have to pay for their motherhood. The out-patients of our Women's Hospital, as well as our private ones, furnish numerous examples of invalidism due to faulty obstetrics. Sometimes the cause is an ignorant self-styled midwife, at others the hasty or indiscriminate use of forceps, or the indecent hurry to get rid of the placenta. Perinæorraphy, which should be among the least common necessities of the sequelæ of childbirth, is to-day one of its commonest opprobria, and many other instances could be adduced of the obligations of gynecology to obstetrics.

The greatly diminished mortality in lying-in hospitals throughout the world has been largely brought about by the introduction of a rigorous antiseptics, and an increase of cubic space for the individual patient. In this country, the vital statistics of the maternity department of the Melbourne Women's Hospital bear convincing testimony to the value of these important introductions. During the five years, 1889 to 1893, which have elapsed since the opening of the new midwifery department, 4,578 women have been confined therein, with 41 deaths, and when it is remembered how many of these women enter the institution in a low state of health, it must be admitted that '89 per cent. is a rate of mortality that compares with great advantage with that which for many years previously had obtained in the old building.

Enough has been said to show that in these days of advanced science, the mal-administration of obstetrics is inexcusable, and in this connection it may be added, that any State which affords facilities for this mal-administration by unregistered or unqualified so-called midwives, is directly responsible for the evil results which their want of knowledge entails on those women who are unfortunate enough to come under their treatment.

The element of sexual psychopathy, for it can scarcely be termed anything else, which has been a marked feature of some recent English novels, which it is not proposed here to advertise, beyond the mention of the fact that they are in several instances the works of women, is a thing to be deprecated by all thinking medical men. Tortured theories of morbid heredity, exemplified by undesirable or impossible men, women, and children, singly or in pairs, who, if they have not died previously in the story, become possible and occasionally healthy in the last chapter, can serve no good purpose, and may give rise to harmful impressions. It may be retorted that "to the pure all things are pure," and that the end justifies the means; but it is very doubtful if the average mind can rise to heights of purity on stepping-stones of nastiness; and allowing for earnestness of purpose on the part of the writer, no amount of artistic skill and dramatic situation can conceal the strong vein of nastiness that runs through this type of novel. The lesson of self-reverence, self-knowledge, and self-control, will be better inculcated by the inclusion of elementary physiology and anatomy, as essentials in the education of the youth of both sexes. In our chief colleges and schools an attempt in this direction has already been made, but in a very large percentage of growing boys and girls, that which they should be taught early in life they either learn late or not at all.

Much good work, however, deserving of both public and professional recognition, is being done here by the Australian Health Society in furthering the spread of sanitary knowledge. By its yearly course of lectures, its publications and wall-sheets (among the latter, the most recent being an excellent one upon consumption, and the prevention of the spread of that national scourge), it becomes a power in the education of the people; and it is particularly gratifying to find the Society undertaking the examinations of our State School scholars in the "Health and Temperance Manual," which has for some years past formed part of the recognised curriculum, but which has hitherto been without the stimulus of examination and recognition by certificate to those who succeed in passing such examination.

To the beneficial results of these theoretical teachings must be added the great amount of good in matters sanitary effected by the Board of Health. The appointment of Dr. Gresswell to the position of its chairman is heartily welcomed by the profession, and the public is to be congratulated on having at the head of such an important department a gentleman who combines so much energy and conscientiousness with so much practical expert knowledge. In the few short years during which Dr. Gresswell has been the medical adviser to the Board of Health, his energy and perseverance have brought about a number of sanitary reforms which were badly needed. To these in a large measure must be attributed the remarkable diminution in the mortality from typhoid fever and diphtheria during the last five years, as shown by some interesting vital statistics published in the November number of the *Australian Medical Journal*, p. 557. Thus, in Greater Melbourne, in 1889, there were 559 deaths from typhoid fever; in 1890, 403; 1891, 192; 1892, 154; 1893, 120. The returns for 1894 are not yet complete, but they will be but slightly in excess of those of last year. Again, in 1889, there were 329 deaths from diphtheria; in 1890, 400; 1891, 145; 1892, 88; 1893, 33. These figures are eloquent, indeed.

Reference has been made, in the report of the Council, to the prosecutions instituted during the year against persons of both sexes practising under unregistered titles. Such an important step as the

initiation of these prosecutions was not determined on by the Council without careful deliberation. It was felt that, as a body of medical men, our duty is not alone to that part of the public brought immediately under our care, but to that other part also, whose gullibility renders it an easy prey to well-advertised charlatanism. In the absence of "State" prosecutions, the unpleasant duty of expounding our Medical Act devolves on the profession, who are not always credited with disinterested motives by the prejudiced or the lightly-thinking portion of the community. Nevertheless, the Branch has, with the assistance of the forensic knowledge and legal acumen of Dr. Mullen, carried on various prosecutions during the past year with such success as you have heard. In our days, it would seem that the age of brass finds its historic analogue, in one respect at least, for that shining and useful metal, on the principle of *omne ignotum pro magifico*, continues to point a moral or adorn a tale for the ever-increasing army of pseudo-scientific philanthropists, whose brazen growth is fostered by the credulity of that portion of the public which gives its confidence and its ailments to these displayers of brass plates of large superficial area, bearing legends which vary from such nobly-sounding classic gems as "psychiatrist," "somnoliquist," and "psychomist," down to the simple and surely honourable degree of "C.S." which, in neat black letters, has been perpetuated on resplendent brass on a suburban door, outshining by its superior moral lustre the lesser lights of adjacent palmists, futurists, and clairvoyants. For these and all such there is but one prayer—"God help them, and their readers, too."

In looking out upon the broad domain of the medical science of to-day, and observing the restless activity with which the scientific mind is impelled to the exploration of its minutest by-paths, whether we have regard to the enormous advances made in surgery—now such an all-embracing science that there is scarcely a corner of the anatomy that can offer a bar to its technique—or whether we survey the many remarkable mechanical aids to diagnosis, or the ever-swelling storehouse of pharmacology, which presses into its service bird, beast, and fish, most things that grow above the earth's surface, and much that lies beneath, till almost everything, except man himself, has become "a drug in the market," in looking from a medical aspect at this development of human knowledge, we may well pause for a moment and ask—*Quo usque tandem?* What is to be the outcome of this increasing sum of knowledge for the health of the race? And, although short of the gift of prophecy, no man can say, yet the future is in a way dimly revealed by the facts which I have, however imperfectly, tried to put before you this evening. It is perhaps too much to say, as has been optimistically asserted, that within a hundred years there will be no disease that is not curable. Human nature will have to be completely re-modelled before such a consummation is attained, if it is to live according to what, for want of a better phrase, we call "the law of Nature." But medical science is, in the best sense of the term, evolutionary, and will continue to do in the future what it is doing in the present—its great work towards the prevention of the spread of disease.

And the individual, better educated in the laws which regulate the healthy development of the organism, will in the future be a Board of Health unto himself, and will ordain his life in a way that will better enable him to withstand the influences which predispose to ill-health. The transmission of hereditary disease will be checked by the voluntary abstaining from marriage on the part of not only those already affected, but by those also whose family history is under a cloud of

"taint," without the necessity of making the prevention of marriage by those suffering from phthisis and other grave diseases—as was recently publicly advocated by a member of our Branch—a question of State Law. Long before the "future age of universal health" is reached, pure law must commensurate perfect freedom, and, meanwhile, disease will be better understood, and consequently better treated. Even now it is thought by some that we are within measurable distance of discovering the true nature of that fell destroyer, cancer, and, if so, its antitoxin cannot be far away.

And so there may be some show of reason for indulging in the hope that, with the process of time, the evils that flesh is originally heir to, or has since acquired, will have become a matter of ancient history, and that the natural decay of great old age shall remain the sole disease, and that medical science, having become wisdom, will have brought human nature, as far as may be, to the realisation of the poet's mind, that

"Death once dead.
There's no more dying then."

—(Applause.)

The PRESIDENT moved a hearty vote of thanks to Dr. Meyer for his able and interesting address. It evinced the enthusiasm of the successful specialist, and showed how he had obtained success by keeping in touch with general considerations, whilst specially pursuing the work of his choice.

Dr. NEILD had great pleasure in seconding the motion. The address was able, philosophical, scholarly, and scientific. He had followed Dr. Meyer from his student days up to his present high position in the profession, and never found him wanting. He specially congratulated him upon his fearless condemnation of unnecessary surgery.

The motion was carried with acclaim. Dr. Meyer briefly returned thanks.

The rest of the evening was spent by members as guests of Dr. Meyer, at the Vienna Café.

MEDICAL SOCIETY OF QUEENSLAND.

The 96th general meeting of this society was held on December 11th, at 8.30 p.m., in the Society's rooms, William-street, Brisbane. Present: Drs. Bancroft (in the chair), Culpin, Gibson, Cooper, Hardie, Hoggan, Wheeler, Byrne, and Love.

Visitors: Dr. Ayres (Sydney), and Dr. Ashworth.

Dr. Cooper showed the kidneys from a case of hydronephrosis, there being only one ureter, the other being unconnected with the kidney, and ending blindly in the peritoneal cavity.

The following gentlemen were unanimously elected members of the society:—Dr. Feshney, M.B., Ch.M. Syd., North Quay; Alex. J. Fullerton, L.R.C.P., M.R.C.S., Eng., Wickham Terrace.

Dr. Gibson read notes of two cases of foreign body in the trachea (maize corn) and showed specimens.

Dr. Bancroft read notes of a similar case.

Dr. Wheeler read notes of a case of ruptured extra-uterine foetation, with recovery.

Dr. Love read notes of a case of pelvic abscess treated by vaginal drainage, with rapid cure.

The nominations for office-bearers for 1895 were received.

Drs. Bancroft, Byrnes, and Love—the deputation appointed at the last meeting to wait upon the Colonial Secretary with reference to procuring a supply of diphtheria anti-toxin—reported that the Colonial Secretary had assented to their request, and cabled forthwith to London, guaranteeing all expenses.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary, pro tem., of their branch in Brisbane.

All communications intended for the Editors may be addressed direct to "The Editors, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Collins-st., Melbourne; Dr. H. Swift, Franklin st., Adelaide.

All business communications and remittances should be addressed to Mr. L. Bruoh, Medical Publisher, 13 Castlereagh-st., Sydney. Telephone No. 1770.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, JANUARY 15, 1895.

THE NEW YEAR AND THE NEW PROPRIETARY.

IN offering our readers our best wishes for the new year, we may also offer them our hearty congratulations on the achievements of the year which has just closed. To those who are members of the various Australasian branches of that great Association to which we belong, it will be a matter of no little interest that the beneficent aims of the Association, the accomplishment of which throughout these colonies has hitherto been so greatly hindered by the want of some common bond of union between the Association's branches, are, for the future, to be furthered by the practical federation of the whole of the Australasian branches in the possession of a journal which is their organ. This important object has been accomplished by the purchase by the New South Wales branch of the *Australasian Medical Gazette*, and the concession of rights of editorship and representation to each of the sister branches on terms which have been in each case acceptable to and accepted by them. This transaction has crowned a year of unprecedented effort and success on the part of the New South Wales branch. The

retiring president (Dr. Worrall) in his valedictory address in March last, alluded to the need for the possession of such a paper. The Hon. Secretary, in a paper on the aims and policy of the New South Wales branch, read at the April meeting, made the purchase of the *Australasian Medical Gazette* the leading point in his proposed policy, and on the motion of Dr. Sydney Jones it was unanimously resolved that the accomplishment of the objects of the policy enunciated by Dr. Huxtable be forthwith undertaken.

As a sequel to this resolution, a report of the Council on the question of the proposed purchase was submitted to a special general meeting of the branch held on the 22nd June, and was finally adopted by a large majority at the adjourned meeting on the 29th June.

It is not necessary to detail the negotiations with the sister branches which followed this step on the part of New South Wales. It is sufficient to say that the ultimate result has been the satisfactory inclusion of the whole of the sister branches in the matter, so that the *Gazette* today, and for the future, appears as the "Journal of the Australasian Branches of the British Medical Association."

It is needless to add that such a result has not been arrived at without the expenditure of a large amount of energy, the exercise of a considerable degree of patience, and the adoption of a tactful and generous policy of conciliation and concession on the part of those who have been actively engaged in the affair.

And in this connection acknowledgments are in the first place due to the profession within New South Wales, whose generosity, not restricted alone to members of the branch, has made it possible for the Council of that branch to acquire the *Gazette* on so favorable a financial basis. That within the brief space of a few weeks Dr. Faithfull's suggestion (for to him belongs the credit of initiation in this matter) should have resulted in the growth of the substantial sum which now stands to the credit of the "*Gazette Fund*" to upwards of £370, is a splendid and convincing refutation to the charge of indifference to our interests which has frequently been permitted to pass current against us as a profession in these colonies.

Acknowledgments are in the second place due to the Council of the New South Wales branch for the singleness of purpose with which they have, in the face of many difficulties and some discouragement, carried the matter of the purchase of the *Gazette* to so successful an issue. The secret of the success of the Council has, no

doubt, largely lain in that unanimity which has been obvious in all their transactions during this notable year.

Nor is it possible to pass without strong commendation of the action of the Victorian branch in agreeing to relinquish, "in view of the general good," her ancient claim, as the senior, to have the publication of any federal journal for the Australasian branches fixed in Melbourne. Strong as that claim, no doubt, was felt to be, insistence upon it would have necessitated the indefinite postponement of the object in view, and by this graceful and timely act of concession upon the part of the Victorian Branch, the immediate accomplishment of what must otherwise have been a long deferred-hope, has been made possible, and the Council of that branch is to be congratulated upon the energy as well as the judgment with which they seconded the efforts of the New South Wales Council, and recommended and carried through a policy of wise concession.

Where the larger interests of the profession have been in question, South Australia has always been in the van. It was amongst them that the idea of the great carnivals of Australasian medicine—the triennial Intercolonial Congresses—originated, and it was by them that the first Congress was organised and carried out in the spring of 1887, with a method and completeness which have proved a model for all their successors in connection with the Congresses which have followed. The adhesion, therefore, of this branch to such an important step towards the federation of the profession in Australasia was a matter which might have been reckoned upon from the outset, and South Australia was the first of the branches to join with New South Wales in placing the *Gazette* in its present position.

The new-born Queensland branch, though handicapped somewhat by its youth, and the consequent need for nursing its resources, has been enabled to come in on terms hardly so favourable as those of the older branches, and which we sincerely hope to see improved by the growth and expansion of that branch under judicious management. And thus, as far as the existing branches of the Association are concerned, the circle is complete. But we hear that negotiations are even now progressing between Melbourne and Perth, which will probably result in the formation of a new branch for the western colony; and in New Zealand a movement was initiated some time ago, with the object of affiliating the various branches of the New Zealand Medical Association with the British Medical Association—a project which has

so much to commend it that we have small doubt it will, ere long, be accomplished.

The federation of these new branches with our present circle will be a welcome and a mutual advantage, and we trust that some strong spirits amongst them may undertake and carry through the work.

We cannot close without endorsing the encomiums contained in the letter of the New South Wales branch to Mr. Bruck, which appears in another part of this issue. Such appreciation as is therein expressed has been well earned by one who has for so many years conducted this paper, and who has made it, as it has proved itself to be, indispensable to the profession at large. It is gratifying to know that the *Gazette* and its new proprietary carries with it the good wishes of him in whose hands it attained to its present position.

Nor can we refrain from pointing out that the suggestion which has been made at each of the three Intercolonial Congresses, that an inclusive Australasian medical paper should be secured for the whole of the medical profession throughout these colonies, is, by the present change of proprietary, as nearly accomplished as is perhaps possible.

As the journal of a Medical Association, membership of which is open to the whole profession—of an Association, the merit of whose aims and objects has stood the test of considerably over half a century of experience in the old world, and which has, during that period, performed such a vast amount of useful work in our professional interests—of an Association whose branches exist in almost every colony of the group, and whose membership in these colonies numbers close upon 700,—as the journal of such an Association as this, the *Gazette* may surely be regarded as having attained, as nearly as is possible, to the position indicated by the various suggestions and resolutions of the Intercolonial Congresses.

Based upon so wide and representative a foundation as is afforded by this Association, the special danger of journalism of this description—viz. the danger of becoming the exponent of narrow and illiberal views, and of falling into the hands of a set, a section, or a clique of the profession—is guarded against in the most complete manner possible; and were any further guarantee of the conservation of the interests of the whole profession needed, it might be found in the title-page notice to the effect that "The columns of the *Gazette* are open to contributions from all legally qualified medical practitioners"—a notice which has stood for many years past, and which still stands there.

With such guarantees of fidelity to the widest and best interests of our profession, the future usefulness and success of the *Gazette* may be regarded as assured. Practically the property of the whole profession, the responsibility of its future will remain largely with the profession; and in view of the repeated expressions of the need for the existence of a medical paper, occupying the representative position now held by the *Gazette*, we feel that, in offering our readers our best wishes for the new year, we are doing so with a well-founded hope and confidence not only in this new year, but in those years which lie beyond the one upon which we are thus auspiciously entering.

BEHRING'S ANTITOXIN AND DIPHTHERIA.

At the foot of this we reprint the latest account of Professor Behring's method of obtaining his "antitoxine," which is at present attracting such attention in Europe. The lay press out here has calmly assigned the discovery of this valuable remedy to Roux, of Pasteur's institute in Paris. The actual fact is that Roux has been using the remedy extensively in Paris, and the populace, mad with enthusiasm at the success achieved, did not stop to ask who was the inventor of the "cure," but at once assumed that Roux was the French Koch at last. Probably it never occurred to Roux that Behring's discovery was not as well known to the public as it was to himself. However, in his writings no mention is made of Behring in connection with "antitoxine." The discussion at the Congress of Hygiene at Budapest, September 2 to 8, 1894, was opened by Loeffler, the discoverer of the diphtheria bacillus, who concluded his speech thus:—"The most effective means of treating diphtheria is, in my opinion, the use of Behring's antidiphtheric serum." Later on then, M. Roux gave his statistics; from Feb. 1 to July 24, 1894, 448 children were treated at the Hôpital des Enfants, Paris, with antitoxine, the mortality being 24.33 per cent, the average mortality being 51.71 per cent. At the Hôpital Trousseau within the same period, 500 cases of diphtheria were entered, of whom 68.20 per cent died. We need not repeat what has appeared in the daily press. Roux was not the author of the treatment, and only one in a discussion where some nine or ten speakers had a voice. Heubner, of Berlin, also read a paper in the name of Professor Behring, on the use of antitoxine; and Aronson, also of Berlin, reported that he treated 192 cases of true diphtheria by means of the serum, with a mortality of only 11.2 per cent,

which eclipses even the results of Roux. The serum was used in 82 other cases at various hospitals, making 274 cases, with a mortality of 15.3 per cent. There is, we maintain, no necessity for hysterical excitement about the new treatment in this colony. In its own time, a stock of the serum will be available, no doubt, and there is no reason why some of the numerous bacteriologists we have amongst us now should not devote their attention to the immunizing of horses, which will take some time to perform, so that the colony could be independent of Europe. There is also no necessity to send an expensive ambassador home to study the treatment particularly. This should be left to the scientific zeal of the profession. All that is known can be obtained from the columns of the medical literature of the day, which will have circulated through the colonies months before anyone could reach home from here. At any rate, we shall not fail to keep our readers well posted in all that we hear by means of our exchanges, from which we have gathered the facts above detailed. Let us hope that no further disappointment awaits the world which is so interested in this new departure.

The following is the latest account of Professor Behring's method:—A small quantity of diphtheria bacilli being placed in bouillon which contains certain admixed substances, the bacilli multiply rapidly, if the bouillon be subjected to gentle heat while standing; and while growing and multiplying by consuming certain ingredients of the nutritive bouillon, in return they secrete other substances. Among the latter is an intense poison soluble in water. This poison is the cause of the disease, to the extent that other factors are not involved. If to the diphtheria culture be added a little carbolic acid after the colony has been permitted to multiply for several weeks, the bacilli are exterminated, though the poison dissolved in the liquid remains unmodified. When a proper quantity of this poison-solution is injected hypodermatically into animals—horses, etc.—mild sickness follows, but soon passes off. The animal thus treated will now bear a larger dose, and this treatment is prolonged for several months while steadily increasing the quantity of poison injected. In this manner the animals are more and more "immunized," which means that under proper treatment they will bear without noteworthy injury progressively increased quantities of poison—indeed, many times the dose which would at once kill an animal not previously treated.

It is Behring's great merit to have discovered that in the blood of the animals treated there is a substance (antitoxine) which is capable of quenching the action of the poison. If blood be

withdrawn from these animals and permitted to stand, the red-blood corpuscles gather on the bottom of the vessel, and the supernatant liquid (the serum) can be decanted. The serum, which is a rather yellowish liquid and contains the counter-poison or antitoxine, is "Behring's Diphtheria Remedy."

MEDICAL MEN AND FEES FOR POLICE ATTENDANCE.

THE following cutting from a recent number of the *Ballarat (Victoria) Courier* is of great importance, as bearing on the fees earned by medical men when called in by the police:—

"A case of interest to the police and doctors was heard on December 19th at the Gordon police court, when Dr. Alexander Corry proceeded against Constable John Arthur for £2 2s., for medical attendance on Mrs. Cramarie, who was assaulted at Egerton on the 29th July last. Mr. McDermott defended. Dr. Corry deposed that Constable Arthur, in company with Constable Cuthbert, called at his surgery on the evening in question and said, 'I wish you would go and see Mrs. Cramarie.' He did so, and examined and prescribed. Also, at the constable's request, he examined her for a criminal assault. The defence was no liability. If there was any liability it was with the Crown and not by the policeman. The bench, consisting of the police magistrate and three honorary justices, were evenly divided, but Mr. Leader gave his casting vote for a dismissal, with four guineas costs. Mr. McCulloch, one dissenting justice, stated he was in favor of giving a verdict, and thought that when policemen go for doctors again they should be asked to put down the doctor's fee before going with them."

We think Dr. Corry should have forwarded his account to the Inspector-General of Police, who would hardly have failed to pass it; but had he done so, a summons should have been taken out against the Inspector-General and not against the calling-in constable, who was simply carrying out well-known instructions from head-quarters. We never before heard of the services of a medical man not being promptly paid when called in by the police.

Quite apart, however, from Dr. Corry's mistake, the injustice to him is evident, and it is just one of those cases where a little common sense on the part of the magistrates and a little less law would have met the case.

It is clearly laid down in New South Wales, and surely in Victoria, that a doctor shall be paid when called in by the police; the fees are fixed, and never before have we heard of trouble in recovering them. Perhaps it would be wise, after the decision in Dr. Corry's case, to follow out the custom in England, and that a certificate of attendance should be obtained at the time from the inspector or constable on duty.

THE REGISTRATION OF DEATHS IN WESTERN AUSTRALIA.

DR. HAYNES, of Perth, W.A., has kindly furnished us with the correspondence that has taken place between himself, the Attorney-General for W.A., and the Registrar-General for the same colony, on the subject of the registration of deaths, which, it appears, can be carried out by any person, lay or otherwise, who finds it necessary to do so there. The following extract from the *Daily News*, of Perth, will show what led up to this correspondence, which has for once drawn the attention of Government officials to a serious defect in the laws relating to registration in W.A., and will no doubt produce fruit in the near future:—

"An application was made on Saturday to Mr. Cowan, P.M., at the City Court, for a certificate for the burial of a child eight months old. The father, who was the applicant, said that the infant had been treated by a chemist, and that Dr. Haynes, who had been unable to state the cause of death, had declined to give a certificate. 'That is the danger of going to a chemist,' remarked Mr. Cowan, who subsequently asked the parent to let him have the prescription in order that the component parts might be ascertained. The chemist, however, had not given any prescription, and the request could not be complied with. Subsequently a burial certificate was obtained. The symptoms, according to the father, were those of convulsions."

This paragraph was followed by a letter from Dr. Haynes, fully explaining the case, and animadverting upon the ridiculously lax state of the law as to registration of deaths. The following extract is from Dr. Haynes' letter to the editor of the *Daily News*, and gives the facts very concisely:—

"The child was brought to me after it had been treated by a chemist. Five minutes after its arrival it died in my surgery. I refused the death certificate, and referred the parent to the Coroner, and the action of the Coroner is so unique that I feel constrained to give my view of it. He asked the parent what he thought the child died from? The parent replied, 'convulsions.' 'Well,' said the Coroner, 'go to the Registrar, and tell him your child died from convulsions.' This the man did, and the child's death was registered accordingly, for I saw the burial certificate. Now, I can positively state that the child did not die from convulsions; and, moreover, I saw the copy of the chemist's prescription, which was for diarrhoea."

Dr. Haynes is to be congratulated upon his public spirit in drawing attention to this matter, and also upon the results he has already obtained. But we cannot allow our colony to be made out more virtuous than it really is, and therefore we have to mention here what is apparently unknown to Dr. Haynes, and that is that there is no law in New South Wales requiring the death certificate of a duly qualified medical man before interment is allowed. We have protested against

this laxity for years, and we have been in part successful, inasmuch as it is not now generally known that anyone may certify as to the cause of death, and registrars, coroners, and police usually insist upon getting a proper certificate, so that the evil is lessened in many ways. Surely, the letter of Dr. Parry, with our editorial foot-note, in the issue of August last, cannot have escaped the notice of Dr. Haynes, and the "Peculiar Action of a Coroner," indicates clearly that a medical certificate of death is not required in New South Wales at any rate. We append the full text of the replies which Dr. Haynes has received to his communications, and we wish that gentleman success in his new crusade.

Attorney-General's Office, Perth,
Perth, 29/11/1894.

Dr. Haynes, Howick-st., Perth,

Dear Sir,—I thank you for your letter of the 23rd inst., pointing out to me the laxity that prevails in respect of the registration of a death, owing to the want of a medical certificate being required. I think the new Act that will come into force on 1st January next will remedy this state of things, as the certificate must, under these new provisions, be produced.

Yours obediently,
SEP. BURT, Atty.-Genl.

Registrar-General's Office,
Perth, 5th December, 1894.

Sir,—I have the honor to acknowledge the receipt of your letter of the 24th ultimo, for which I thank you, and beg to state that it has been duly submitted to the Honorable the Colonial Secretary, with a suggestion that it be referred to the Coroner, asking for an explanation as to why, under the circumstances, he did not deem it necessary to hold an inquest on the body of the deceased infant therein referred to.

I have the honor to be, Sir,
Your obedient servant,
MALCOLM A. C. FRASER,
Registrar-General.

Dr. E. A. HAYNES,
Howick-street, Perth.

ITINERANT QUACKS.

"PROFESSOR" RICHARD, "M.E.," has at last met his deserts at Capetown. His lectures at the Sydney School of Arts will be well within the remembrance of our readers, who are not perhaps aware that one of his first appearances was in Melbourne some few years ago, when he bore an Italian *nom de guerre*. For reasons not unconnected with finance, he departed suddenly for Tasmania, where he flourished. The creditors left lamenting took out a warrant for his arrest, but he pacified them by wiring over a few hundred pounds. New Zealand was then successfully exploited, and, finally, Sydney and Newcastle. At Capetown the Medical Council has taken action against him for contravening

the Medical and Pharmacy Act of 1891, and at the criminal sessions last month he was fined £25, or in default one month's imprisonment with hard labor. The Chief Justice, in reminding the accused that he had made himself liable to a fine of £100, said that, seeing that he (the accused) had come to Cape Colony as an utter stranger, and had been practising in other countries without being stopped, the punishment was mitigated. It was most regrettable that our forbearance towards such unscrupulous persons should be used to mitigate a well-deserved sentence in another colony. We are, however, greatly pleased that such a useful law is in existence at Capetown, whereby an impostor may be brought to justice. In New South Wales it is impossible to prevent itinerant quacks from practising as they list. In the United States of America they manage things better. For instance, in the state of Illinois itinerant quacks have to take out a license for every day they remain in the State and this costs them 75 dollars per diem. What a valuable source of revenue is here lost to the country for want of a little useful legislation in this direction. The Medical Bill introduced or proposed to be introduced by Mr. G. H. Reid does not seem to be any quicker in appearing before the House than its predecessors. There seems to be no alternative left but for the New South Wales branch of the B.M.A., which is now so very strong, to form a Parliamentary Bills Committee, as at home, and to press upon the Government and the individual members, the claims of the profession in New South Wales to some more consideration than has yet been shewn in the matter of legislation.

SPECIMEN OF COUNTRY ADVERTISING.

WE reprint the notice underneath from the Quirindi *Argus* for the benefit of our readers. There have been very stirring times at this select spot, Quirindi, and some months ago matters medical were very mixed. They are not likely to run on an even keel now, in face of the advertisement we here insert. Let us hope that a grain or two of self-respect is left in the breasts of those who insert such disgraceful announcements, and that they will go and sin no more.

MEDICAL.

DR. SAMUEL A. CLINTON, M.D., F.R.C.S., E., &c.
(Registered by N.S.W. Medical Board),

Late Physician to Hospitals for Diseases of Women,
Cancer, and Consumption,

HAVING succeeded Dr. Yeates, may be consulted at that gentleman's late residence, Henry-street, Quirindi. Latest scientific treatment, including Electricity and Massage. Resident patients received. Resident Dental Surgeon.

EASTERN SUBURBS MEDICAL ASSOCIATION
OF SYDNEY.

WE are in receipt of a copy of the rules of this young society, and wish it all success. A circular has already been issued to the members, inviting their co-operation in drawing up a series of statistics on the diseases prevailing in the Eastern suburbs. A blank schedule, to be filled in by the observers, accompanies the circular, which is signed by Dr. James A. Dick, of Randwick, as hon. secretary. The subscription to the society is only five shillings per annum, and the objects aimed at are most laudable. It is a very healthy sign to see a new society like this coming forward with such a well-defined and useful programme as the following:—

Rule 3. The objects of the Association shall be—

- To hold periodical meetings for the discussion of subjects of special interest to members and honorary members practising in the Eastern suburbs, to urge upon the various Borough Councils and sanitary authorities the necessity, where such exists, for constructing sanitary works, &c. and otherwise to prevent, as far as possible, the spread or outbreak of disease in the district.
- To advance the general and social interests of the Profession. To promote fair and honourable practice, and to decide questions of professional usage and courtesy.
- The consideration of all matters relating to medical science.

The districts embraced by the term "Eastern Suburbs" are held to be: Paddington, Woollahra, Waverley and Randwick.

NEW SOUTH WALES BRANCH.
"GAZETTE" FUND.

The following is the list of contributors to this Fund to date:—

	£	s.	d.		£	s.	d.
Samuel T. Knaggs ..	10	0	0	E. Roberts-Smith ..	5	0	0
Thomas Fiaschi ..	10	0	0	B. H. MacCulloch ..	5	0	0
J. Foreman ..	10	0	0	T. Chambers ..	10	0	0
L. B. Huxtable ..	10	0	0	Alfred Foster ..	3	2	0
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James Kingsbury ..	5	5	0	B. Scot Skirving ..	5	0	0
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James A. Dick ..	5	0	0	A. Murray Oram ..	10	0	0
G. A. Marshall ..	5	0	0	Arthur E. Mills ..	3	3	0
Walter Hull ..	10	0	0	P. T. Thane ..	1	1	0
G. H. Taylor ..	5	0	0	Joseph English ..	1	1	0
A. J. Brady ..	5	0	0				
P. Sydney-Jones ..	10	0	0				
				Total £373 3 0			

The Council understands that, in consequence of a current impression that smaller contributions than the average of those enumerated above would not be suitable, many members have refrained from giving small amounts. The Council therefore desire to inform members that contributions of any amount, however small, will be welcome, and in order to give members an opportunity of having a share in the establishment of this important fund, it has been decided to keep the list open for another month.

L. RALSTON HUXTABLE, Hon. Secretary.

THE CHANGE OF PROPRIETORSHIP OF THE
A.M. GAZETTE.

THE following correspondence is published by direction of the Council of the New South Wales Branch of the British Medical Association:—

Sydney, 31st December, 1894.

LUDWIG BRUCK, Esq.,

Proprietor and Publisher of the

Australasian Medical Gazette.

Dear Sir,—I am directed by the Council of this Branch to forward to you the following resolution, which was unanimously passed by the Council at its final meeting in the matter of the purchase of the *Gazette*.

"That, in completing the purchase of the *Gazette* on account of the Branch, the Council desires to express its sense of the service which has been rendered to the medical profession in these colonies by the energy, enterprise and ability of Mr. Bruck, in the publication of the *Gazette* during an unbroken period of upwards of fourteen years. The wide circulation of the *Gazette* throughout the colonies is an undeniable expression of the appreciation of the profession at large, and the unanimity of the Australasian branches of our Association in desiring to make it for the future the special organ of these branches may be taken as conclusive evidence of the value placed upon the *Gazette* by them. As representing this branch, the Council desires to convey to Mr. Bruck its thanks for the important services rendered by him in this matter."

In conveying this resolution to you, I may be permitted to add my personal acknowledgment of the courtesy and generosity which you have shown throughout the whole of the long and trying negotiations relating to this matter, and extending over the greater part of the past year—negotiations which could not have ended in the accomplishment of the object in view had it not been for repeated concessions upon your part.

I am, faithfully yours,

L. RALSTON HUXTABLE,

Hon. Secretary.

Sydney, January 3rd, 1895.

L. RALSTON HUXTABLE, Esq.,

Hon. Secretary of the New South

Wales Branch of the B.M.A.

Dear Sir,—It is my pleasing duty to acknowledge the receipt of your letter of the 31st ult., which reached me to-day, conveying to me the gracefully-worded, and to me very gratifying resolution, unanimously passed by your Council, and I need not say that it is highly appreciated by me. I take this opportunity of acknowledging the support which I have received so ungrudgingly during a period of upwards of thirteen years from the profession, and especially from country practitioners throughout the colonies, as well as the invaluable service rendered to the *Gazette* by the Hon. Dr. J. M. Creed, M.L.C., for eleven years.

I further desire to express my hearty thanks to you for your uniform courtesy throughout the negotiations, the satisfactory result of which is principally due to your indefatigable exertions in the matter.

I trust that all those subscribers and contributors to the *Gazette* who are not yet members of any of the Branches of the B.M.A. will continue to support the journal as in the past, and wishing the new proprietary every success in their undertaking,

I remain, dear sir, yours faithfully,

LUDWIG BRUCK.

LETTERS TO THE EDITORS.

UNREGISTERED PRACTITIONERS AND DEATH CERTIFICATES.

(To the Editors of the Australasian Medical Gazette.)

SIRS,—Will you oblige me with some information upon the following points?

We have practising here, the man Russell, who recently represented himself to be Dr. Ussher Russell, of Parramatta. This man practises, gives evidence in court, swears that he is legally qualified, and issues death certificates. A chemist here also attends as a medical man, and issues death certificates.

I wish to ask you :—

1. Can an unqualified man issue certificates in this way, and even go into the box, and swear that he is qualified, without rendering himself liable to any action.

2. What steps, if any, should I take in the matter? I have said openly that Russell is a quack, but this is attributed by many to "professional jealousy."

With apologies for troubling you in this matter,
Believe me, Sir, yours faithfully,

ARTHUR GRIEVES,
L.R.C.P. Lond., M.R.C.S. Eng.
Govt. Medical Officer, Wyalong.

[Elsewhere in this issue will be found a report upon Dr. Haynes' case of burial without death certificate from a properly qualified practitioner in W.A. In New South Wales such is not required, as we have frequently pointed out. If a man goes into the witness box and swears that he is legally qualified, when such is not the case, he commits perjury, and the police should prosecute him for so doing. This they cannot do without having their attention drawn thereto. It may be within some of our readers' recollection that a man named Russell was tried in Sydney for practising with a forged diploma and personating Dr. Ussher Russell, but, to the Judge's amazement, he was found guilty of uttering the forgery, but innocent of the intention of defrauding anyone thereby! Whereupon he was discharged. The man has had the acumen to see that he cannot be tried again on the same charge, and may possibly be trying it on for someone else to prosecute him again on a fresh charge.—ED. A.M.G.]

A DISCLAIMER.

(To the Editors of the Australasian Medical Gazette.)

DEAR SIRS,—As certain paragraphs of an advertising character referring to me have appeared in the daily lay press, I wish at once, through the medium of your journal, to state that I disclaim any connection with them. They were published unknown to me and were uninspired by me.

I very much regret that my name should have appeared in them, and that the kindness of well-meaning friends should have been so injudicious.

Requesting you to kindly publish this letter in your next number,

I am, yours faithfully,

DAGMAR BERNE, L.R.C.P. & S.

"Cyrus," The Avenue,
Newtown, Sydney, Dec. 31, 1895.

THE WARIALDA (N.S.W.) HOSPITAL.

(To the Editors of The A. M. G.)

GENTLEMEN,—In your article in current number on the Medical Adviser's report, you accuse the Warialda Hospital and others in adjacent districts of "robbery," "swindling" of the public funds. I have no desire to retort in similar extravagant terms, but request you to kindly permit me to say a few words to show that the Warialda Hospital has a right to exist—the said right being denied by you.

First.—This year to date we have treated fifty-three indoor patients and seventeen outdoor.

Second.—Our average indoor number has been about four. During several weeks in the winter all our seven beds were occupied, and we had no spare bed if an emergency case came in.

Third.—To the North there is no other hospital in N.S.W., and it is about a hundred miles to the border.

Fourth.—There is no railway within the district, and the roads are so bad that twenty miles is equal to over a hundred by rail, and, with a sick person, takes far longer to travel. To send many of the patients we received to the next hospital, (twenty-six miles,) would mean death to them.

Fifth.—As to the Government subsidy. Does not the Government subsidise many medical men, and even send them on costly trips for the public benefit? Should not, therefore, the Government assist these remote districts to pay a large enough salary to enable them to have a medical man of repute among them, and not allow them to be the prey of dead-beats and quacks, as otherwise they would be? Comparisons with districts like Tamworth are irrelevant. They are compact and populous—we are vast and sparse.

I am, Gentlemen, yours, etc.,

T. J. HENRY.

Warialda, December 22, 1894.

HYDATIDS.

(To the Editors of the Australasian Medical Gazette.)

GENTLEMEN,—In the "editorial" article on Hydatid disease in the December number the writer states that, if the envelopes of the embryos of the *Tænia Echinococcus*, after they have entered the stomach of man, are not dissolved by the gastric juice, "they (the embryos) develop in the upper part of the small intestines into *tænia*."

I was not aware that the *Tænia Echinococcus* had ever been found in the human intestine. May I be permitted to ask the writer, through you, for further information upon this interesting subject,

I am, gentlemen, yours obediently,

ALFRED LONDON, M.D.

Adelaide, December 31st, 1894.

TO CORRESPONDENTS.—A Country Doctor: We cannot insert your letter, as on hearsay evidence you have no right to impute such dishonorable action to a duly-qualified professional brother.—ED. A. M. G.

ADVERTISER, with many years experience in leading London Hospital, seeks engagement as NURSE OR VALET TO INVALID; travel or otherwise; good references. Address GEORGE DOWNER, G.P.O., Sydney.

ACCOUNTANCY.—Mr. S. R. Richardson is open to engagement. Recommended by city physician. Attendance as desired. Terms moderate. Books posted and accounts issued. Address "Hill Crest," Parramatta-road, Ashfield.

REVIEWS.

ESSENTIALS OF THE DISEASES OF THE EAR. By E. B. Gleason, S.B., M.D., Clinical Professor of Otolaryngology, Medico-chirurgical College, Philadelphia, Surgeon in charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia. Saunders' Quiz Compend. No. 24. Philadelphia: W. B. Saunders, 925 Walnut-street, 1894. Sydney: L. Bruck. Price: 4s. 6d.; by post, 4s. 10d.

THIS admirable little work gives in a concise, but by no means crabbed form, the whole range of aural surgery, with anatomy, tests for hearing, complete examinations in pathology, operations and formulae, arranged in the form of questions and answers, similarly to other "Quiz compends," that we have from time to time reviewed in our columns. This seems to us to be one of the most useful of the whole series, and we have much pleasure in recommending it to practitioners who have not the leisure to con over larger textbooks on this most important branch of our profession. The illustrations are very good, many of them being from standard works not always accessible to the busy practitioner. The book is well got up, decidedly cheap, and handy and up to date.

A MANUAL OF HUMAN PHYSIOLOGY: Prepared with special reference to students of medicine. By Joseph H. Raymond, A.M., M.D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in the Hoagland Laboratory, Philadelphia. W. B. Saunders, 925 Walnut-street, 1894. Sydney: L. Bruck. Price: 6s.; by post, 6s. 6d.

A VERY useful manual, containing in a small space a perfect resumé of modern physiology without that compression which usually renders the less pretentious handbooks so unreadable. The author has presented nothing but accepted facts, and enters into no discussion as to the merits of certain theories, the struggling through which is such hard work to the student. Names are few and far between, and in every case of conflicting opinion the author gives his own decision on the matter. There are no references of any kind, and all notes are carefully suppressed. There are no superfluous illustrations, and those given are from the best of the larger works on anatomy and physiology. The work is got up with the usual care and attention to minutiae that characterises all work issuing from the celebrated publisher's firm of W. B. Saunders, and is moderate in price.

THE BEARER'S COMPANION: FIRST AID TO THE INJURED AND MANAGEMENT OF THE SICK. AN AMBULANCE HANDBOOK AND ELEMENTARY MANUAL OF NURSING FOR VOLUNTEER BEARERS AND OTHERS. BY E. J. Lawless, Surgeon-Captain, 4th V.B. East Surrey Regiment. Edinburgh and London: Young J. Pentland, 1894. Sydney: Angus and Robertson, Castlereagh-street.

THIS useful work will come as a boon to the instructors of ambulance classes, as well as to those in charge of bearer detachments, not as yet very numerous in the Australian armies. The exercises, drill &c., are as issued in the *Medical Staff Corps Manual for 1893*. The author says, and we cordially agree with him, "that *The Manual*, replete as it is with regulations and matter bearing upon the administration of that body, is scarcely adapted to the more limited needs of a regimental bearer section, or of a volunteer brigade bearer

company." In a certain defence force, which shall be nameless, the medical staff had been some years organised before it was discovered where the stretcher drill was to be found, so religiously had the C. O. of the ambulance and his sergeant-major kept the secret. It took some months before copies of the *Manual* could be procured for all hands. The work now before us is replete with every detail that a handbook to the work of the St. John's Ambulance Society ought to have, plus the military matter that will make it almost indispensable to army surgeons and ambulance instructors. The illustrations are good and most intelligible. Altogether we can congratulate Dr. Lawless upon the successful manner in which he has carried out his self-imposed task, and recommend his book to those of our readers who take an interest in ambulance work and medical staff training.

THE DYSPEPSIA OF PHTHISIS: ITS VARIETIES AND TREATMENT, INCLUDING A DESCRIPTION OF CERTAIN FORMS OF DYSPEPSIA ASSOCIATED WITH THE TUBERCULAR DIATHESIS. By W. Soltan Fenwick, M.B., B.S., Lond., Member of the Royal College of Physicians; Assistant Physician to the Evelina Hospital for Sick Children, &c. London: H. K. Lewis, 136 Gower-st, W.C., 1894.

THIS is a very valuable monograph on a subject of the greatest interest to those practitioners who have a large medical practice to work. The author has taken an infinite amount of care in putting together his data, which, owing to their being based on accurate pathological researches, undertaken by himself, amount to the significance of hard facts, and will have to be considered by all future writers. Dr. Fenwick claims to have conclusively established that a certain form of dyspepsia invariably precedes phthisis, and gives a classical description of the condition of such doomed patients. It is, however, just possible that the reverse obtains; in other words, that dyspepsia predisposes the patient to impregnation by the tubercle bacillus, and that she (it is usually a female in such cases) would not have become phthisical had she not been dyspeptic. Many valuable rules are laid down for treatment, and the references are numerous and apposite. The reviewing of a work like this is a very great pleasure, and we heartily recommend it to our readers as an indispensable aid to the study of phthisis.

NOTICE TO MEMBERS OF THE NEW SOUTH WALES BRANCH.

THE New South Wales Branch having taken over the *Gazette* and its assets from Mr. Bruck, the Council desires to intimate to members that, having arranged to supply for the future the *Gazette* to all members of the Branch free of cost, the balance of subscriptions which have been paid to Mr. Bruck for the *Gazette* for any period on and after the 1st January, 1895, will be refunded on written application being made to the Hon. Treasurer (Dr. Clubbe), College-street. The Council, however, will be glad to accept such balances as contributions to the *Gazette* fund, in every case in which members so situated may be agreeable to such an arrangement.

L. RALSTON HUXTABLE, Hon. Sec.

CLINICAL MEMORANDA.

CASE OF A CHILD INJURED BY
A BOAR.

By J. H. S. FINNISS, M.B., CH. M., EDIN., OF
GLENELG, SOUTH AUSTRALIA.

THE following case may prove of interest to your readers:—On 13th of September, ult., at 9 a.m., the child of Mr. J. K., a farmer at Morphett Vale, was attacked by a boar, which ran loose about the farm-yard. On my arrival at 10.30 a.m., one hour and a half after the event, I found a child of about 3½ years of age, lying on a bed in a state of collapse, with the eyeballs turned up, eyelids half closed, and cold, clammy perspiration, pulse scarcely perceptible. He was covered up with a not very clean blanket. On lifting this up, I found a coil of small intestines, about two feet long, protruding from an abdominal wound, midway between the umbilicus and crest of the ilium. There was a flesh wound about two inches long, but the perforating wound was not more than half an inch long. The gut was almost black from strangulation and over-distension with flatus, and was also sprinkled in parts with dust. Finding it impossible to reduce the protruded part through such a small opening, I gave the boy chloroform and enlarged the wound, and after washing and cleansing the intestines with warm solution of perchloride of mercury, I returned them into the abdominal cavity, stitched the wound, and applied proper dressings. I gave the child an opiate and some stimulant. On calling in the evening I learnt that he had been sick all day and could keep nothing on his stomach. Temperature 100.5 deg. F. Gave another opiate, which produced refreshing sleep for some hours. Next morning, temperature 100 deg., sickness stopped, abdominal tenderness, but looking brighter and stronger. Ordered spoon diet, etc. On the third day, as the bowels had not acted, I administered an injection of about one dram of glycerine. This, in a few minutes, brought out a copious motion, which greatly relieved the patient. From that time the improvement continued, and on the 11th day I removed the last stitch, and the patient was out of bed and is now perfectly well.

Glenelg, S. Australia, 31st December, 1894.

STRYCHNINE IN SNAKEBITE.

DR. O. W. JONES, Civil Surgeon, Wun District, India, reports in the *Indian Medical Gazette* for November, 1894, the following case of viper-bite (*Crotalus Bungarus*), successfully treated with strychnine. Dr. Jones says:—

The bite of a venomous snake is distinguished by the punctures. The cobra inflicts two small punctured wounds; vipers, usually four small wounds, arranged in two rows. The amount of danger from the bite of a snake depends on the amount of poison injected. The poison acts on the nervous system through the blood, and thus produces death.

Details of Case.—Radhi, aged 13, a Gond by caste, left her home in company with her mother and sister at 10 a.m. of the 8th instant, and while gathering bits of dry wood in the adjoining scrub jungle, the girl put her foot between some loose stones and felt that she was stung. Her mother, who was behind her, saw that it was a snake that bit her child, the snake being about 24 inches long, with a circumference of 1½ inches, dark or black in colour, and marked by white cross streaks. The snake escaped. Fifteen minutes after being bitten, the girl had a slight convulsive fit, followed by dizziness, vomiting, and dimness of sight; the body at this period being covered by profuse perspiration. The vomited matter contained blood. She partly walked and was partly carried by her people to the hospital. When *en route* she complained of dryness of her throat, dimness of vision, while a small quantity of blood escaped from the mucus membrane lining her mouth, a stain of blood being seen on her *sari*. The girl was bitten about 2 p.m. and was admitted at 3.30 p.m. On admission, 10 ms. of liquor strychninæ were at once injected under the skin just above the bite, which was on her right little toe. On examining the part bitten, four minute indistinct punctured wounds were seen. The foot was swollen and the part bitten discoloured and highly congested; her pulse was 120 and her respiration 24; there was also puffiness of the face and congestion of both eyes, while the right lower extremity felt paralysed.

At 4 p.m. 5 ms. of liquor strychninæ and 5 ms. of rain-water were injected on the dorsum of the affected foot.

At 4.30 p.m. the respiration was 20 and her pulse 100.

At 5 p.m. she felt better and took a good drink of wheat-flour congee.

At 5.30 p.m. the congested state of the eyes disappeared, and the girl stated that she felt quite well and was anxious to get home.

At 6 p.m. she was allowed to go home, with the promise that she would show herself at the hospital next morning.

6th, 8 a.m.—The girl states that she is quite well. The affected part is still swollen; discoloration in little toe less. Pulse and respiration normal.

R. P. Jalapi Co. ... gr. 40
st.

7th, 8 a.m.—Discharged, cured.

Remarks.—The krait, next to the cobra, is most destructive to human life. It is common all over India, and is found in fields and among debris of wood. Its poison is, however, less active than that of the cobra. The therapeutic action of strychnine as an antidote to the poison was very marked in this case, and if a similar case presented itself for treatment I should certainly prefer using it to any other remedial agent.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during November to every 1,000 of the population was 2·60, and of deaths 1·38. Sixty-one deaths or 14·95 per cent. of the total deaths occurred in public institutions. The deaths of children under five years of age during the month were 819, or 51·90 per cent. of the total, 262 being under the age of 1 year. Eight deaths of child-bearing women took place during the month, or 1 death of a woman to every 137 births recorded.

THE Government intend to instruct the Agent-General to dispatch a supply of anti-toxine every fortnight.

THE following gentlemen have been appointed examiners, to act with professors and lecturers in the conduct of the forthcoming medical examinations at the Sydney University:—Anatomy, Dr. A. E. Mills; physiology, Professor Stirling; materia medica, Dr. A. Watson Munro; pathology, Dr. G. E. Rennie; surgery, Sir Alfred Roberts; medicine, Dr. Mackellar; medical jurisprudence, Dr. Ashburton Thompson; psychological medicine, Dr. F. Norton Manning; ophthalmic medicine and surgery, Dr. Murray Oram; clinical medicine, Dr. P. Sydney Jones; clinical surgery, Dr. Fiaschi; midwifery, &c., Dr. James Graham.

IN view of the outbreak of typhoid fever at Wilcannia, the Government has dispatched a marquee and a quantity of bedding for the fever patients, in addition to granting £100.

WE are informed that the action for damages against Dr. Cooper, of Tamworth, referred to in our September issue, will not come on again till March.

THE Balmain United Friendly Societies' Dispensary, which had 2,200 members in November, attended to by three medical men, who in the aggregate receive £900 per annum, increased on December 1st by not less than 550 new members from the Manchester Union and R.C. Guild. The medical officers, however, are not to receive an increased salary, as the committee state that they have to engage an additional dispenser at a salary of £150 per annum, and it is calculated that the new members will require about £50 worth of medicine in the year.

WE deeply regret to have to record the death of James Jarvie Hood, M.B. et Ch.M. et D.P.H. Glas. 1890, who died suddenly on December 26th, at Grafton, where he had practised for the last twelve months in conjunction with Dr. Houlson. The deceased gentleman, who was a brother of Dr. A. Jarvie Hood, of Sydney, arrived in the colony four years ago, when he commenced practice at Wollongong; he then removed to Maclean, and finally to Grafton. Prior to his departure for Australia he held the appointment of Assistant Demonstrator to the Practical Physiology Class at the Glasgow University, and he also was a surgeon in the "State" line of steamers. He was only 29 years and 11 months of age at the time of his death.

DR. FELIX P. BARTLETT, of Cowra, has gone to England for a few months, leaving his two nephews, Drs. Frank and Ralph Bartlett, in charge of his practice.

MISS DAGMAR BERNE has returned to Sydney, after an absence of over four years, during which she has qualified as L.R.C.P. and S. Edin., and L.S.A. Lond.

Miss Berne was clinical assistant at the new Hospital for Women, Euston-road, London, also medical officer to the Tottenham Fever Hospital.

DR. CARRUTHERS, of Balmain, returned to the colony by the R.M.S. Ormuz, after twelve months' absence in the old country.

DR. R. G. CRAIG, late of the P.A. Hospital, has succeeded to the practice of Dr. Service, at Newtown.

DR. R. W. CROOKE has succeeded to the practice of Dr. W. Finlay, at Young.

DR. S. A. DOWE, late of Wilcannia, is now practicing at Wyalong.

DR. P. J. DROUGHT has left Crookwell.

DR. R. FERGUSON, of Newcastle, has been elected President of the Northern Caledonian Society.

DR. SINCLAIR FINLAY, of Stroud, has gone to Europe for six months. During his absence his practice will be carried on by Dr. W. Irwin.

DR. W. LEAHY, a recent arrival, has settled at Crookwell.

DR. G. E. MILES, the senior medical officer at Callan Park, has been promoted to the position of Medical Superintendent of the Hospital for the Insane, at Newcastle. Dr. Miles has also been appointed Health Officer for the Port of Newcastle, in the place of Dr. Ross. Dr. Miles, on leaving Callan Park Hospital, was presented by the officers and staff with a handsomely illuminated complimentary address in book form, and a beautiful silver-mounted inkstand.

DR. R. J. MILLARD, Junior Medical Officer at the Hospital for the Insane, at Parramatta, has been transferred to the Hospital for the Insane at Callan Park.

DR. H. C. MOIR, formerly of Summer Hill and Taree, has started practice at Armidale.

DR. A. J. O'FLANAGAN, of Merriwa, has returned to the colony, after an absence of twelve months in the old country.

DR. W. PEIRCE has been gazetted Assistant Health Officer at Watson's Bay, *vice* Dr. Sibley, retired.

DR. R. PROUDFOOT has been appointed Resident Medical Officer at the Prince Alfred Hospital, Sydney, in the place of Dr. Craig, resigned.

DR. G. E. RENNIE has resigned his position as Assistant Physician at the Sydney Hospital.

DR. CHISHOLM ROSS, Medical Superintendent of the Hospital for the Insane at Newcastle, has been appointed to the same position at the new Hospital for the Insane at Kenmore, near Goulburn.

DR. J. F. SOUTER, formerly of Guyra, has started practice at Manilla.

DR. W. C. SPEECE has returned from his trip to the United States, and resumed practice at Cobar.

DR. G. H. TAYLOR has been appointed Medical Superintendent of the Coast Hospital at Little Bay, near Sydney, as foreshadowed in our November issue.

NEW ZEALAND.

THE proportion of the deaths registered during November to every 1,000 of the population was 0·82 for Auckland and suburbs, 1·02 for Wellington with suburbs, 0·77 for Christchurch and suburbs, and 0·50 for Dunedin and suburbs. The total births in these four boroughs during November amounted to 373, against 400 in August. The deaths in November were 130, to which

males contributed 80 and females 50. Thirty-nine of the deaths were of children under 5 years of age, being 30.00 per cent. of the whole number; 27 of these were under 1 year of age.

THE auxiliary lunatic asylum at Avondale, near Auckland, a large wooden building near the main asylum, which was built of stone, was burnt down on December 20. There were about 100 patients in the auxiliary asylum at the time, but all were got out safe. The damage done is estimated at £10,000.

THE Queenstown District Hospital (30 beds) at Frankton, on the shores of Lake Wakatipu (Otago), was last month destroyed by fire, but fortunately no lives were lost.

THE partnership hitherto existing between Drs. John Guthrie and A. L. Devenish-Mearns, of Christchurch, has been dissolved by effluxion of time. The practice will henceforth be carried on by Dr. Devenish-Mearns on his sole account.

DR. L. E. BARNETT, of Dunedin, has been appointed Lecturer on Surgery at the Medical School of the Otago University, for two years, at a salary of £125 per annum and fees.

DR. W. F. BAUCHOP has removed from Port Chalmers to Lumsden, 50 miles north of Invercargill.

DR. A. BRONTE has commenced practice at Ashurst, near Palmerston North.

DR. H. G. DAVENPORT has removed from Woodville to Ohingaiti.

DR. H. W. M. KENDALL, of Hokitika, has been appointed Honorary Surgeon to the First Westland Ride Volunteers.

QUEENSLAND.

A SURGEON is wanted for the Hodgkinson District Hospital at Thornborough, the centre of a declining gold-mining district, about 1,020 miles north-west of Brisbane, via Port Douglas or Cairns; salary £200 per annum, with right of private practice. Applications should be in the hands of the secretary, Mr. W. Wolstencroft, not later than 5th February.

DR. J. T. R. COOK, formerly of Parkville (Melbourne), has commenced practice at Mackay.

DR. M. I. FITZGERALD has left Isisford for Western Australia.

DR. B. B. HOGGAN has left Brisbane for Sydney.

DR. A. JACK has removed from Montalban to Townsville.

DR. A. W. ORR has commenced practice as a specialist in diseases in the eye, ear, and throat, at the A.M.P. Buildings, Edward and Queen streets, Brisbane.

DR. M. W. C. PERCEVAL, late of New South Wales, has succeeded to Dr. Fitzgerald's practice at Isisford.

DR. V. J. R. ROBIN, of Brisbane, and formerly of Hawthorn (Vic.), has been appointed surgeon to the Port Douglas Hospital in place of Dr. Bowser. The latter has served a number of residents with Supreme Court writs for alleged defamation of character.

DR. W. BOUTH, late of Townsville, and formerly of Georgetown, has removed to Croydon, where he intends to start practice.

SOUTH AUSTRALIA.

WE regret to have to record the death of George Mayo, M. 1829, F. 1861, R.C.S. Eng., L.S.A. Lond.

1828, J.P., a very old colonist, and the oldest practitioner in South Australia, who died at his residence at Adelaide on the 16th December, at the ripe old age of 87. The deceased gentleman was an Honorary Consulting Surgeon of the Adelaide Hospital, Hon. Colonel of V. M. Force, and formerly he held the position of President of the S. A. Medical Board.

DR. C. A. HARRISON has started practice at Renmark.

DR. H. O. IRWIN, of the Adelaide Hospital, has been appointed House Surgeon at the Adelaide Children's Hospital, in succession to Dr. H. A. Powell, who has resigned this position, which he has held for the last two years.

TASMANIA.

THE Hon. Dr. J. W. Agnew, of Hobart, at one time Premier of the colony, has been made a K.C.M.G.

DR. C. E. DUMBLETON has started practice at St. Helens.

DR. E. O. GIBLIN, of Hobart, Surgeon-Captain in the Tasmanian Rifle Regiment, has been promoted to the rank of Surgeon-Major.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during November to every 1,000 of the population was 2.66, and of deaths 1.14. Males contributed 56 per cent. and females 44 per cent. to the mortality of the month. Children under five years of age contributed 33 per cent. to that mortality, as against 38 per cent. in November, 1893. One hundred and eleven deaths, or 22 per cent. of the whole, took place in public institutions.

THE Medical Board of Victoria announce that a letter, in accordance with section 7 of the Act, having been sent to the last-named address of each of the undermentioned persons, and no answer having been returned to such letter within the period of six months from the sending thereof, their names have been erased from the Official Register accordingly:—860, James Fisher Anderson; 1,557, George Purcell Atkins; 1,732, George H. H. Bagot; 1,602, John Barker; 1,600, John Edward Barrett; 1,068, Charles P. Bellamy; 1,155, Francis Alexander Bennet; 1,157, Henry Charles Bowser; 1,623, Walter H. Bracewell; 918, Arthur Somers Bradford; 1,718, Andrew Seymour Brewis; 1,767, Arthur E. N. Browne; 1,693, Matthias Butler; 1,182, Stephen M. Caffyn; 1,817, Donald Cameron; 864, Phillip Forth Casey; 921, Matthew Wardell Chambers; 1,865, Robert Cheyne; 1,099, Henry Bolton Clarke; 1,658, William Hughes Clarke; 1,435, Cambridge Cary Cocks; 1,627, Michael Joel Cohn; 1,680, John T. R. Cook; 1,801, Guy C. Cory; 175, John A. Creelman; 1,119, Herbert M. Curtayne; 1,199, James Davison; 1,363, Henry O'Brien Deck; 1,570, John V. C. Denning; 612, Charles Duret; 1,733, Charles C. Eardly-Wilmot; 1,123, Nicholas P. Elliott; 1,523, Edward George Erson; 1,194, Cadwallader E. Evans; 1,431, John H. Evans; 919, W. Featherstonhaugh; 142, Frederick F. W. Ford; 1,703, Albert E. Foster; 1,624, Arratoon Gabriel; 1,591, Charles Burke Gaffney; 1,587, Rastanji Dinshaji Ghandy; 1,200, Frank Godfrey; 1,682, Horace Percy Godfrey; 1,220, G. R. M. Graham; 886, Charles Edward Gray; 104, Richard H. Harrington; 1,219, Richard Richards Harvey; 813, William Edward Le Fanu Hearn; 105, Thomas Hillas; 616, Henry Benjamin Hinton; 1,699, Edgar Holecroft; 843, Arthur C. Hutchings; 1,740, H. J. D. Innes; 1,121, William Henry Johnstone; 1,245,

Alfred James William Keenan; 1,742, Patrick John Kelly; 1,460, Robert Vandeleur Kelly; 1,519, Thomas John Moore Kennedy; 1,168, William Henry Lang; 1,545, Arthur Septimus Lawrence; 1,626, Richard J. Leeper; 1,546, Richardson W. Lewers; 1,719, Edmond Henry Lindsay; 1,650, John Peter Long; 959, Harry S. Lyons; 1,487, Lawrence F. Mahoney; 1,156, John Marchbank; 647, Joseph Bell Marr; 1,596, Charles Mattei; 1,741, Edward Mattei; 1,857, John Allan Moffat; 1,387, John F. Mollyneux; 1,538, Charles P. Moreton; 1,210, Robert Morrow; 1,631, James M. M. Muir; 1,641, Charles D. McCarthy; 1,358, William George McClure; 1,783, Eliza Foster McDonogh; 1,765, Lucius G. A. MacDonnell; 1,470, John McGuiness; 1,638, Robert D. MacGregor; 1,613, John McNerny; 393, James MacGregor MacIntyre; 1,816, William Mackay; 1,211, W. G. McLennan; 1,556, George A. Macnutt; 782, William Peel Nesbitt; 1,192, Edward H. B. Nickoll; 1,478, Humphreys R. H. Peare; 1,330, Montagu W. C. Perceval; 1,393, William Phelps; 1,593, John Quilter; 1,558, Thomas Augustus Quirk; 1,808, Adam Rolland Rainy; 1,694, John Rees; 1,267, James Alexander Robertson; 319, Charles Robinson; 1,709, Arthur Edwin Ronald; 1,511, James Ferdinand Rudall; 1,135, Hugo A. H. Schiel; 873, Charles Henry Scott; 1,776, Robert Scott; 193, Walter Scott; 1,566, Edward Esdale Shiels; 1,447, William Henry Shirreff; 1,692, George Shirres; 1,204, Robert Smith; 1,653, Cecil Lucius Strangman; 1,451, William Stuart; 1,639, Edward Glover Tennant; 1,705, Percival J. W. Ternau; 750, John Davies Thomas; 1,186, Herbert W. S. Verity; 1,841, Arthur Vores; 1,450, Richard Wallace; 1,633, Samuel Lane Wallace; 1,305, George Albert Walpole; 1,036, Richard B. Warren; 1,621, James Ramsay Webb; 738, David William B. Wilkie; 1,314, Herbert E. R. Wolridge; 332, Henry Wooldridge; 1,815, Francis George Wright; 1,398, Thomas Cole Wright; 1,122, John de Courcy Young.

At a recent meeting of the Professorial Board of the University of Melbourne, Professor Dr. H. B. Allen was unanimously re-elected President for the ensuing year, and on the motion of Sir Frederick McCoy a vote of thanks was accorded to Professor Allen for the able and diligent manner in which he had discharged the duties of President in the year expiring.

THE degree of Bachelor of Medicine of the University of Melbourne was conferred, on December 22nd, by the Chancellor, Sir Anthony Brownless, on the following 17 graduates, including two ladies, viz.:—Alfred Austin Brown, George Howard Brown, Arthur Waldo Connelly, Edwin Zerubabel Davies, Ernest Arthur Dombrain, Colin Gray, William Weston Hearne, John Daniel Hurst, Stanley Connebee Jamieson, Glen Alburn Knight, Bernard Loughrey, Annie Genevieve O'Hara, Grace Vale, William Booker Vance, Alf. Ernest Walsh, Arthur Bridges Webb, Howard Gladstone Williams.

At the annual meeting of the Victorian Branch of the British Medical Association, held in Melbourne on December 19th, the following office-bearers were elected for the ensuing year:—President, Dr. Snowball; vice-president, Dr. O'Sullivan; members of council, Drs. Meyer, Gresswell, Springthorpe, Kenny, Mullen, Molloy, McAdam, and Stirling. The retiring council reported that 15 new members had been added to the society during the past year, but resignations and deaths exceeded that number by 10, leaving the membership now at 194. Dr. Kenny, the hon. treasurer, reported that there was a credit balance of £240. Dr. Meyer, on retiring from his office of president, delivered an address, in which he referred to the progress of medical knowledge during the past year.

WE regret to have to announce the death of Mr. Benjamin Fyffe, M.R.C.S. Eng. 1860, L.R.C.P. Lond. 1874, a colonist of over 31 years' standing, who died suddenly from syncope, at his residence in Gore-street, Fitzroy (Melbourne), on the 19th December, aged 58 years. The deceased gentleman, who arrived in New South Wales in 1863, practised in Sydney for 15 years, and removed to Melbourne in 1878, where he resided ever since.

DR. BALLS-HEADLEY, of Melbourne, has been invited to write one of the chapters of "The System of Gynecology," a new and important work edited by Dr. Playfair and Professor Clifford Allbutt, to be published by Macmillan and Co. towards the end of this year.

DR. A. O. BOBARDT, a native of the colony, has received a commission, and been appointed a surgeon to Her Majesty's Fleet.

DR. JAMES BOYD, sen., has returned to Bendigo from his trip to Europe.

DR. W. I. BOYES is now practising at Wangaratta.

DR. P. W. FRASER, formerly of Launceston, has returned from his trip to Europe, and succeeded to the practice of Dr. Weber at Natimuk.

DR. THOS. MURPHY, of Bendigo, has been elected President of the Australian Natives' Association for the ensuing year.

WESTERN AUSTRALIA.

DR. HERBERT W. NIX has been appointed Resident Government Medical Officer of Pilbarra District, also Public Vaccinator for the Urban and Suburban Districts of Marble Bar and the Rural District of Pilbarra.

DR. H. A. ELLIS, late of Darlinghurst (Sydney), has settled at Coolgardie, the great mining centre of Western Australia, where, we are informed, he has started practice in conjunction with Dr. Haynes, of Perth.

Fiji.

WE much regret to have to announce the death of David Blyth, M.B. et Ch. M. Glas. 1880, who died suddenly from apoplexy, at his residence at Suva, on the 18th November last, at the early age of 39. Dr. Blyth first arrived in the colony in 1883, under engagement to the colonial Government of Fiji, and was stationed at Levuka. A few years later he returned to Scotland, but finding the climate too cold for him he returned to Fiji early last year, and settled at Suva as a private practitioner. The deceased gentleman was a great favourite with all classes.

MEDICAL APPOINTMENTS.

Baehop, William Forsaith, L.R.C.P. et R.C.S. Edin., to be a Public Vaccinator for the Luncheon district, N.Z.

Graham, Albert William, M.R.C.S.E., to be an additional Public Vaccinator for the district of Riverton, N.Z.

Hogg, Richard Bowen, M.R.C.S.E., to be a Public Vaccinator for the Timaru district, N.Z.

McBrearty, James, L.F.P.S. Glasg., to be a Public Vaccinator for the district of Brunner, N.Z.

Macdonell, James Alexander, M.D. Abern., to be a Public Vaccinator for the Bulter district, N.Z.

Minchin, Edward James, L.R.C.S. I., L.K.Q.C.P., Irel. to be a Public Vaccinator in South Australia.

Thomson, John Bell, M.B., Ch.M. Edin., to be a Public Vaccinator for the district of Arrow, N.Z.

Wride, George Francis, M.R.C.S.E., L.K.Q.C.P. Irel., to be Health Officer for the town of Warrnambool, Vic.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following gentlemen, having presented their diplomas, have been duly registered as legally qualified Medical Practitioners by the Respective Boards:—

NEW SOUTH WALES.

Davies, Thomas, L.R.C.P. Edin., 1890; L.R.C.S. Edin., 1890; L.F.P.S. Glasg., 1890.
 Leahy, William, L.R.C.P. Edin., 1892; L.R.C.S. Edin., 1892; L.F.P.S. Glasg., 1892.

For Additional Registration:—

Parker, Arthur Frederick, M.D. Brussels, 1886.

NEW ZEALAND.

Greenwood, Cecil D., M.R.C.S. Eng., L.S.A. Lond., 1883.

QUEENSLAND.

Cook, John Thomas Robert, M.B., 1890; Ch.B. Melb., 1891.
 Macdonald, George Bothwell Douglas, M.B., Ch.M. Aberd., 1887.
 Stewart, Andrew, M.B.M.S. Glasg., 1883.

SOUTH AUSTRALIA.

Gibbes, John Murray, M., 1868; L. Mid., 1866; R.C.S. Eng., M.B., Ch.M., 1866; M.D. Aberd., 1883.
 Merkle, Alexander Jamieson, M.B., Ch.M., 1892; M.D. Edin., 1894; L.R.C.P. & R.C.S. Edin.; L. & L. Mid.; F.P.S. Glasg., 1892.

TASMANIA.

Dumbleton, Charles Hardy, L.S.A. Lond., 1883; M.R.C.S. Eng., 1884; M.D. Cantab., 1891.

VICTORIA.

Fraser, Paul Wilkes, M.R.C.S. Eng., 1886; L.R.C.P. Lond., 1887.
 Rockett, Richard Napoleon Francis, M.B. Melb., 1894.
 Dow, James Wallace, M.D. & Ch.M. Toronto, 1894.

WESTERN AUSTRALIA.

Birrell, David Anthony, L.R.C.P. & R.C.S. Edin.; L.F.P.S. Glasg., 1889.
 Powys Henry Lionel, M.R.C.S. Eng.; L.R.C.P. Lond., 1894.
 Ellis, Henry Augustus, M.B., 1884; B.S. Dubl., 1885.
 Nix, Herbert W.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.
 —If the claims made by its advocates for this method of treatment prove true, its discovery will be the greatest boon to humanity since the days of Jenner and his immortal contribution in the cause of humanity. In the Kaiser Friedrich Children's Hospital in Berlin, before the use of antitoxin, in 1,081 cases of diphtheria then treated, the mortality was 38.9 per cent. Since March, of 128 cases treated with antitoxin the mortality has been but 13.2 per cent. Dr. Cyrus Edson, Commissioner of Health, of New York, has made the following statement:—"As tested by Professor Koch and those associated with him, in 250 cases the antitoxin treatment produced the results noted below: When the treatment was applied within the first 24 hours, all cases were cured. When cases were inoculated on the second day of the disease, 97 per cent. recovered; when inoculated on the third day, 87 per cent. recovered; on the fourth day, 76 per cent.; on the fifth day, 57 per cent. By the treatment any person who has been exposed to the disease can be made free from further hazard if the symptoms have not been developed. If cases are treated within 36 hours, the mortality can be reduced to practically nothing. It can be seen how wonderful the treatment is when it is understood that the average mortality of true diphtheria is 27 per cent." Caution is, however, to be exercised as to the kind of antitoxin employed, and those who intend to use the remedy should investigate this most carefully.—*Brooklyn Medical Journal*, October, 1894.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

LAWRY.—On October 16, at Auckland, the wife of T. Spencer Lawry, M.B., of a daughter.
 LINDSAY.—On October 7, at Auckland, the wife of Dr. P. A. Lindsay of a daughter.
 STONEY.—On August 7, 1894, at Cobargo, N.S.W., the wife of Dr. E. B. Stoney of a son.
 BROWN.—On December 16, at Parramatta, N.S.W., the wife of W. Sigismund Brown, M.R.C.S. (Eng.), of a daughter.
 CORRY.—On December 7, at Kingston, Vic., the wife of W. Corry, M.D., of a son.
 GARDE.—On November 17, at Maryborough, Queensland, the wife of Henry Oroker Garde, F.R.C.S., of a daughter.
 JENKINS.—On January 1, 1895, at Sydney, the wife of Edwd. J. Jenkins, M.D., of a daughter.
 KENNY.—On December 14, at Oakleigh, Vic., the wife of Dr. Hamilton Kenny, of a daughter.
 KIRKLAND.—On November 13, at Croydon, Sydney, the wife of Dr. Speirs Kirkland, of a son.
 MOORE.—On December 2, at Bathurst, N.S.W., the wife of Dr. Brooke Moore, of a daughter.
 PATON.—On December 7, at Sydney, the wife of Dr. R. T. Paton, of a son.
 SWEETNAM.—On December 10, at Penahurst, Vic., the wife of F. A. Sweetnam, L.R.C.S. & P., of a son.
 WELLS.—On Christmas Eve, at Sale, Vic., the wife of L. Selfe Wells, M.D., of a daughter.
 WOOLLEY.—On the 7th inst., at Castlemaine, Vic., the wife of G. T. Woolley, surgeon, of a son.

MARRIAGE.

WADHAM-TAYLOR.—November 21, at St. John's, Bishopsthorpe, Sydney, Frederick Wadham, F.R.C.S. Eng., of Strathfield, to Mary B. Taylor, Brighton, England.
 SHIRLOW-WHITTLE.—November 20, by the Rev. C. J. Prescott, M.A., S. Stewart Shirlow, M.B., Ch.M., of Richmond, N.S.W., to Alice Whittle, adopted daughter of W. Hamilton McOlelland.
 KERR-MITCHELL.—November 29, 1894, by the Rev. John Walker, of Woollahra, Alexander Livingstone Kerr, M.D., F.R.C.S.E., second son of the Hon. A. T. Kerr, M.L.O., Orange, to Eliza Victoria Mitchell, widow of the late Stewart Soales Mitchell.
 MUNRO-GUNNING.—December 24, 1894, at Woollahra Presbyterian Church, Andrew Watson Munro, M.D., F.R.C.S.E., of Sydney, to Sophia, youngest daughter of the late John Gunning, Ballyvester, Ireland.

ALVARENGA PRIZE of the College of Physicians of Philadelphia.—Dr. Chas. W. Dulles, Secretary of the College of Physicians of Philadelphia, desires us to announce that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about 180 dollars, will be made on July 14, 1895, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College on or before May 1, 1895. Each essay must be sent without signature, but must be plainly marked with a motto, and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1894 has been awarded to Dr. G. E. de Schweinitz, of Philadelphia, for his Essay entitled:—"Toxic Amblyopia."

REPORTED MORTALITY FOR THE MONTH OF NOVEMBER, 1894.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from											
					Measles.	Scarlet Fever.	Group and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.
N. S. WALES.																
Sydney	111,244	257	173	91	...	...	...	...	2	14	7	16	11	11	...	1
Suburbs	275,615	838	408	111	...	6	9	1	1	39	29	18	21	13	...	8
NEW ZEALAND.																
Auckland & suburbs..	42,545	102	85	11	...	...	3	...	...	1	3	3	2	1	...	1
Christchurch ..	41,590	76	33	8	...	...	...	...	...	5	5	1	3	...	...	...
Dunedin ..	48,478	92	24	7	...	...	...	...	...	2	1	2	2	1	...	...
Wellington ..	38,298	78	39	18	...	...	1	...	...	...	2	6	6	1	...	...
QUEENSLAND.																
Brisbane	56,075	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA	344,551	792	328	117	...	11	5	7	2	11	27	41	28	14	...	...
Adelaide	39,749	111	72	21	...	1	2	...	...	3	8	6	8	1	...	...
TASMANIA.																
Hobart	54,404	86	36	7	...	...	1	1	...	1	2	1	...	1	...	...
Launceston	22,356	49	32	3	...	...	1	...	...	1	1	1	...	1	1	...
Country Districts	80,454	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VICTORIA.																
Melbourne	64,171	116	50	170	...	3	2	3	6	10	56	11	36	35	...	6
Suburbs	880,661	1061	487	14	...	...	...	1	1	...	10	12	11	2	...	1
Ballarat and Suburbs	...	139	74	...	...	...	...	...	...	...	...	...	...	...	...	...
WESTERN AUSTRALIA*	79,665	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending

METEOROLOGICAL OBSERVATIONS FOR NOVEMBER, 1894.

STATIONS	THERMOMETER.				Mean Height of Barometer.	RAIN.	HIDITY.	WIND.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.				
Adelaide—Lat. 34° 55' 33" S.; Long. 138° 36' E.	107	68.4	45.3	29.914	...	...	...	...
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.	73	60.6	48	...	5.66	17	76	...
Brisbane—Lat. 27° 28' 8" S.; Long. 153° 16' 15" E. ....	...	...	...	...	...	...	...	...
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.	77.4	56.3	39	...	2.34	12	67	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.	75	54.2	36	...	4.38	11	69	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.	89	...	40	29.660	2.42	11	45	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.	78	...	40	29.832	1.01	6	81	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.	106.7	62.2	41.5	29.899	0.79	7	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E. ....	...	...	...	...	...	...	...	...
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.	97.5	71.0	55.3	30.028	0.68	7	58	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.	70	57.5	42	...	4.13	11	76	...

ORIGINAL ARTICLES.

LARGE HYDATID CYST (PROBABLY CONGENITAL) IN A CHILD THREE YEARS OF AGE, CURED BY RADICAL OPERATION.

By A. MUELLER, M.D., YACKANDANDAH,
VICTORIA.

As among the numerous cases recorded in our Australian literature, I fail to find one in which the radical operation for the removal of an echinococcus cyst was successfully performed on so young a child, and in which the cyst, in proportion to age, had attained to such dimensions as in the case submitted herewith, I have much pleasure in placing it on record.

A large echinococcus cyst, occupying the greater part of the abdomen in a child only a few years old, justifies the suspicion of its origin dating back to foetal life. It, no doubt, happens but rarely that a pregnant woman receives into her system an echinococcus embryo; but, given the latter, and the probability of its reaching the foetus, the chances appear greatly in favour of its being arrested there. But, apart from the great size of the cyst, which it must have required some years to attain, other circumstances favour the supposition of its having been congenital. The mother stated that the child had always been delicate, and conspicuous for a "high stomach," which, however, she attributed to its being brought up "on the bottle," and that the size of her abdomen had steadily increased from year to year. The cyst, as will be shown hereafter, was also remarkable on account of the extreme thinness and delicacy of its fibrous capsule, making it a matter of surprise that spontaneous rupture had not taken place, and frustrating to some extent the safe union of its surface with parietal peritoneum.

The little girl, B.B., was brought to me from the Upper Murray, a distance of seventy miles, on the 20th of September last. Though small for her age, very pale and emaciated, she makes the impression of an organically healthy child. On her being undressed, the great distension and size of her abdomen at once strikes the eye. Its measurements were: $9\frac{1}{2}$ inches around the short ribs, $10\frac{1}{2}$ inches around the navel, and $8\frac{1}{2}$ inches midway between navel and symphysis. To her emaciated little body, in fact, it fully bore the proportions which that of a pregnant woman shows at the seventh or eighth month. Her

violent screams and struggles on being touched render a satisfactory examination somewhat difficult, but an elastic tumour can be felt distinctly, extending on the right side from the pelvis to the under-surface of the liver, occupying the greater portion of the right side of the abdomen, and with its lower part encroaching on the left side as well. As there was also an evident bulging-out of the right hypochondrium, and the liver protruded considerably beyond the short ribs in front, whilst the cyst seemed attached to its lower surface, the impression was that of an enormous cyst extending from the interior of the liver right down to the pelvis. Examination under chloroform, immediately preceding the operation, rectified this impression by disclosing two cysts, one in the interior of the liver, and as yet not presenting on the surface, and the other one (distinctly separate), extending from the under-surface to the pelvis, and apparently springing from the back part of the abdomen. Taking into consideration the tender age and the delicate condition of the child, I determined, with the full concurrence of Dr. Skinner, who kindly administered the chloroform, to remove only the abdominal cyst at this operation, leaving that in the liver for a subsequent one later on. The incision was made midway between navel and symphysis. The cyst, on being laid bare, was found to be unattached to the parietal peritoneum, and its membranes were so thin as to be almost transparent. After being transfixed in the usual manner by two stout loops of silk, the cyst was opened, and its membranes stitched to the edges of the wound by a continuous catgut suture. But, though as much of the membranes was taken into this suture as possible, it was found that they had broken away at the upper edges of the wound, where, in consequence, part of the ileum was presenting. Here they were sutured a second time, and then stout sutures of sterilised silk, embracing all the tissues from skin to peritoneum, and once more transfixing the thin cyst-walls, were made to unite the wound, a large drainage-tube having been passed to the bottom of the cyst, which was a sterile one without daughter-cysts, and apparently attached to the lower part of mesentery. An antiseptic and stimulating dressing of lint saturated with Bals. Peruvian and Tr. Myrrhae, fixed by long strips of adhesive plaster, and over this a thick padding of tenax, completed the operation, which only lasted ten minutes.

There was no sign of shock, the child kicking and screaming lustily as soon as she awoke from the chloroform. During the night and subse-

quent forty-eight hours, the cyst discharged serum very freely, necessitating fresh dressings twice a day; but the temperature during the progress of the case never rose above 101, and the child continued to take food well. On the fifth day after the operation the discharge became somewhat fetid and the cyst was carefully washed out with a 10 per cent. boric acid lotion at every dressing. The treatment now became very troublesome, as the child was very refractory and had to be held down by several adults during the dressings. Owing to the constant discharge the skin had softened, and the silk sutures had cut through, first intention not having taken place except in the deepest parts of the wound. As there was considerable danger of the girl in her violent struggles bursting the wound open, the sutures were removed, and long strips of adhesive plaster had to be applied encircling the whole abdomen, crossing over the wound and again reaching half way around the abdomen. These on account of the discharge still being fetid, had to be renewed every day. On the ninth day, the cyst membrane presented slightly at the side of the tube, and on the latter being drawn out I was at last able to get hold of it with a forceps and remove it, apparently in one piece. The discharge now decreased, both in fetor and in quantity, and the tube had to be shortened from day to day, as the lower part of the cyst contracted and collapsed. On the morning of the 14th day, I was surprised to find the tube blocked by what appeared to be the fibrous capsule, and to bring part of the latter with it, on its being drawn out. This, on examination, turned out to be the part of the cyst-wall which had broken away during the operation, and been stitched on a second time. When I found it actually perforated in some places, and in others very thin, I determined on its removal, and, using as much traction as I thought safe, drew out a large part of it, which I twisted into a coil, transfixed and tied with a silk ligature, as close to the skin as possible, and then cut off above the latter. Into the small bag thus formed a little drainage tube was passed, and by daily traction and a fresh ligature below the first one the cavity was reduced until the discharge ceased completely, and the tube could no longer be inserted. Thanks to the tight adhesive plaster bandages, a very firm union without bulging was obtained, and the child taken home exactly one month after arrival, much improved in health, but not fit to undergo a second operation, especially during the hot season. As the cyst in the liver is likely to be packed with daughter cysts, aspirating it does not appear advisable, and I shall therefore remove it, if possible; but instead of uniting the cyst-walls with

the edges of the wound by suture, I intend to follow Volkmann's method of laying the cyst bare by incision, and then packing the wound with aseptic cotton wool, until after a week or ten days the two peritoneal surfaces are firmly glued together, when the cyst may be opened freely without any danger of its establishing communication with the peritoneal cavity by the thin membranes breaking away from the stitches. That, in spite of such communication existing probably from the very onset in this case, there were no symptoms of peritoneal tenderness and septic peritonitis, was a piece of exceptional good luck, more than of good management, although free drainage and careful asepticism in the dressings may have contributed their share in bringing about an unexpected favourable result. It is more than doubtful that the result would have been the same if this large cyst had been merely aspirated and allowed to suppurate, for, judging from the discharge it sent forth for days after the operation, it would have refilled rapidly; and the thin membranes, in a state of suppuration, could not have resisted the pressure from within, but would almost certainly have given way. Only prompt laparotomy and complete removal of the cyst could then have saved the child.

NOTES ON HYDATID DISEASE IN NEW SOUTH WALES.

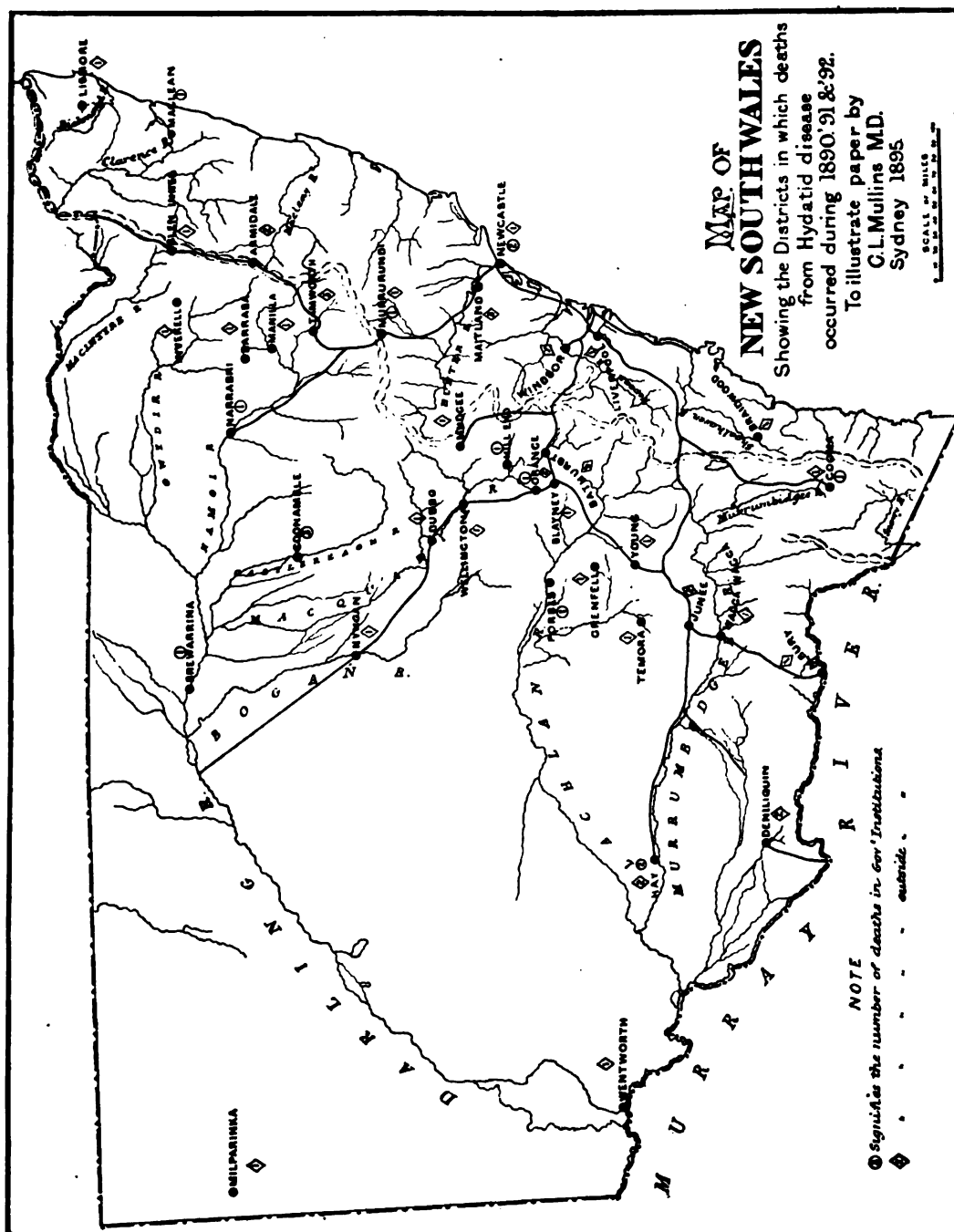
BY GEORGE LANE MULLINS, M.A., M.D.,
T.C.D., Waverley, N.S.W.

HYDATID disease is one of those ailments which may be studied in Australia more practically than in any other country in the world. I regret that I am unable to obtain the number of cases of hydatid disease occurring in the various parts of the colony, so I am compelled to limit my observations to those which have had a fatal termination.

The following table, showing the number of cases which terminated fatally in each colony, may be of interest:—*

Year.	N.S.W.	Vic.	S.A.	Q'Ind.	Tasm.	N.Z.
1880	—	48	—	1	1	9
1881	—	48	—	2	1	3
1882	—	58	12	3	4	7
1883	10	56	6	4	4	1
1884	20	59	13	25	6	3
1885	23	47	5	19	2	3
1886	21	51	18	9	2	4
1887	27	51	9	17	3	2
1888	22	53	13	—	—	—
1889	24	61	11	3	—	—
1890	35	53	8	2	0	3
1891	33	58	12	3	3	3
1892	33	63	12	0	8	13
1893	49	—	—	—	—	8

* Note.—Where no figures are given returns are not to hand.



The statistics which I am about to quote are for the years 1890-91-92, and the populations those of the census of 1891.

The population of New South Wales was (excluding Aborigines and half-castes) 1,123,954. The total number of deaths from all causes (in the three-year period) was 44,914; while the fatal cases of hydatid disease numbered 101. Hydatid disease, therefore, caused one death in every 444.

The deaths occurred in the following districts:—

SYDNEY (City)—

District.	Males.	Females.	Total.
Sydney Hospital ...	2	5	7
St. Vincent's Hospital ...	—	2	2
Fitzroy Ward ...	2	2	4
Denison Ward ...	1	—	1
Total ...	5	9	14

SUBURBAN DISTRICTS.

District.	Males.	Females.	Total.
Prince Alfred Hospital ...	13	3	16
North Shore Hospital ...	1	1	2
Lewisham Hospital ...	1	—	1
Glebe Children's Hospital ...	1	1	2
Paddington ...	2	—	2
Balmain ...	1	—	1
Rockdale ...	1	—	1
Leichhardt ...	1	—	1
Waterloo ...	—	1	1
Burwood ...	—	1	1
North Sydney ...	—	2	2
Total ...	21	9	30

COUNTRY DISTRICTS.

District.	Males.	Females.	Total.
Lismore ...	—	1	1
Maclean (Hospital) ...	1	—	1
Inverell ...	—	1	1
Glen Innes ...	—	1	1
Armidale ...	—	2	2
Tamworth ...	—	3	3
Manilla ...	—	1	1
Barraba ...	1	—	1
Narrabri (Hospital) ...	1	—	1
Murrurundi ...	—	1	1
Murrurundi (Hospital) ...	1	—	1
Maitland, West ...	1	2	3
Newcastle ...	1	—	1
Newcastle (Hospital) ...	1	—	1
Newcastle (Hosp. for Ins.) ...	—	1	1
Braidwood ...	1	—	1
Cooma ...	1	—	1
Cooma (Hospital) ...	1	—	1
Liverpool ...	—	1	1
Windsor ...	—	1	1
Bathurst ...	1	2	3
Mudgee ...	—	1	1
Hill End (Hospital) ...	1	—	1
Orange ...	—	2	2
Orange (Hospital) ...	—	1	1
Wellington ...	1	—	1
Dubbo ...	—	1	1
Nyngan ...	1	—	1
Coonamble (Hospital) ...	2	1	3
Brewarrina (Hospital) ...	1	—	1

COUNTRY DISTRICTS—continued.

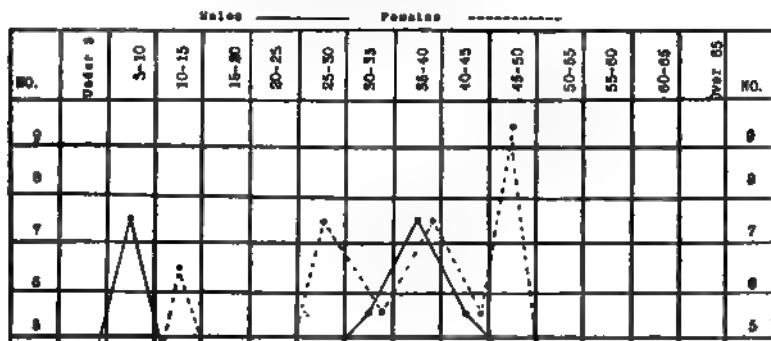
District.	Males.	Females.	Total.
Blayney ...	1	—	1
Forbes (Hospital) ...	1	—	1
Grenfell ...	—	1	1
Young ...	1	—	1
Temora ...	1	—	1
Junee ...	1	1	2
Wagga Wagga ...	1	—	1
Albury ...	—	1	1
Deniliquin ...	—	2	2
Hay ...	1	1	2
Hay (Hospital) ...	—	2	2
Wentworth ...	—	1	1
Milparinka ...	1	—	1
Total ..	25	32	57

Reference to the accompanying map shows that most of the fatal cases occurred in towns situated on the western slopes of the Great Dividing Range.

AGE AND SEX.—The following table shows the age of each person dying from hydatid disease during 1890-91-92, distinguishing males and females:—

Age.	M.	F.	Total.	Age.	M.	F.	Total.
1	—	—	—	41	1	1	2
2	1	—	1	42	1	1	2
3	2	—	2	43	—	—	—
4	—	—	—	44	—	1	1
5	2	—	2	45	—	1	1
6	—	—	—	46	—	3	3
7	2	1	3	47	—	2	2
8	2	—	2	48	3	1	4
9	1	—	1	49	1	2	3
10	—	1	1	50	1	—	1
11	2	2	4	51	1	—	1
12	1	—	1	52	1	—	1
13	—	1	1	53	—	—	—
14	—	2	2	54	—	1	1
15	—	—	—	55	—	—	—
16	—	1	1	56	1	—	1
17	1	—	1	57	—	—	—
18	1	—	1	58	—	—	—
19	—	1	1	59	—	1	1
20	—	1	1	60	—	2	2
21	—	—	—	61	1	1	2
22	—	—	—	62	—	—	—
23	—	1	1	63	—	—	—
24	1	1	2	64	1	—	1
25	—	2	2	65	1	—	1
26	1	3	4	66	2	—	2
27	2	—	2	67	—	—	—
28	—	1	1	68	—	—	—
29	1	1	2	69	—	—	—
30	1	1	2	70	—	—	—
31	2	3	5	71	—	—	—
32	2	1	3	72	—	—	—
33	—	—	—	73	—	—	—
34	—	—	—	74	—	—	—
35	2	—	2	75	—	—	—
36	—	2	2	76	—	—	—
37	—	1	1	77	—	—	—
38	2	1	3	78	1	—	1
39	3	3	6	79	—	—	—
40	3	2	5	80	—	—	—

Chart showing the number of deaths from Hydatid Disease at each age-group, distinguishing Males and Females, 1890-92 (N.S.W.).



As will be seen from the above chart, the curve for males differs from that for females. For males there is a rise until 10 years is reached, then a gradual decline to 25; again a rise to 40, then a decline to 60, after which there is a very slight rise. The maximum is reached at ages 5-10 and 35-40 years.

For females no cases are recorded under the age of five years. The rate rises to 15, then declines to 20, rising again to 30. During the next period there is a slight decline, but a rise is again noticed at 35-40. At 40-45 there is again a slight lowering of the rate, which quickly rises at the next period, when it reaches its maximum. From this there is a rapid decline, no cases being recorded after the age of 65.

Of the 101 deaths during 1890-92, slightly over one-half (viz., 51) were of males, and 50 of females. They were distributed as follows:—

	Metropolis.		Country.	
1890 ...	9 males,	5 females	6 males,	15 females
1891 ..	9 "	7 "	8 "	9 "
1892 ...	8 "	6 "	11 "	8 "
	26	18	25	32

The population in 1891 consisted of 608,003 males and 515,951 females. There was, therefore, among males one death for every 85,176 male inhabitants, and among females one for every 80,957 inhabitants (females). Hydatid disease is, therefore, slightly more prevalent among females than among males. The proportion is about seven to six.

OCCUPATION.—Of the 51 males no less than 28 had no specified occupation. Of the other 28 the occupations were:—

Labourers	... 11	Painter	... 1
Farmers	... 3	Miner	... 1
Bushmen	... 2	Bricklayer	... 1
Jockey	... 1	Butcher	... 1
Solicitor	... 1	Traveller	... 1
Runner	... 1	Stonemason	... 1
Carter	... 1	Engineer	... 1

Cordial manufacturer, 1

Of the 50 females the occupations are stated as follows:—

Married women	6	Widow	... 2
Domestic servant	8	Private life	... 1
House duties	3	Nurse	... 1

No occupation or unspecified, 34.

PATHOLOGY.—By far the most common seat of the disease is the liver. In most cases the liver alone was affected, while in many others the liver together with another organ was the seat of the trouble. Among males the disease was found in the following organs:—

Liver	... 22	Brain	... 6
Lung	... 4	Abdominal Cavity	2
Liver and Brain	2	Liver and Lung	1
Pericardium	... 1	Unspecified	.. 13

Total 51

Among females the order was :

Liver ...	29	Lung ...	8
Brain ...	1	Uterus ...	1
Abdominal Cavity	1	Liver and Lung	1
Liver and Spleen	1	Liver and Pleura	1
Liver and Pericardium	1	Liver and Intestines	1
Unspecified	10	Total	50

For both sexes the order was as follows:—

Liver ...	51	Brain ...	7
Lung ...	7	Abdom. Cavity	3
Liver and Lung	2	Liver and Brain	2
Pericardium ...	1	Liver and Spleen	1
Liver and Pericardium	1	Liver and Pleura	1
Uterus ...	1	Liver & Intestines	1
Unspecified	23		

Of these cases one male and six females died after operation. It may also be stated that many of these persons had disease of other organs in addition to the hydatids.

SEASON OF THE YEAR.—The deaths were recorded in the months as follows:—

—	M.	F.	Total.
January ...	2	5	7
February ...	7	3	10
March ...	3	2	5
April ...	4	3	7
May ...	4	3	7
June ...	4	7	11
July ...	7	2	9
August ...	2	1	3
September ...	2	7	9
October ...	6	4	10
November ...	4	3	7
December ...	6	10	16

The season of the year appears to have little, if any, influence upon the mortality rate of the disease. Nor are meteorological conditions important factors in its production.

SUMMARY.—Hydatid disease is met with chiefly on the western slopes of the Great Dividing Range or in districts supplied with water from rivers and creeks having their origin in the western slopes. Of 57 deaths occurring outside the metropolitan area (Sydney and suburbs), no less than 43 were in districts so situated. Of the towns receiving water from the eastern slopes (excluding the Metropolis), there were 13 deaths, while the remaining one occurred at Milparinka, in the extreme north-west of the colony. In the metropolis 44 deaths occurred, of which no less than 30 are reported from the various hospitals of the city and suburbs.

The mean age at death is a little over 33 years.

The disease is slightly more prevalent among females than males.

The most fatal age-groups are: males 5-10 years, 35-40 years; females, 45-50 years.

From ages 30 to 45 the curves (see chart) for both sexes are coincident.

Farmers and bush-hands are the principal occupations of those who succumb to hydatid disease.

The liver is almost invariably the seat of the disease, but in many cases other organs, such as the brain and lung, are affected either primarily or secondarily.

Meteorological conditions do not appear to influence the rate of mortality from the disease.

TWO CASES OF MAIZE CORN IN THE LOWER AIR PASSAGES.

(Read before the Queensland Medical Society.)

BY J. LOCKHART GIBSON, M.D., EDIN.,
M.R.C.S., ENG., HON. SURGEON FOR EAR,
THROAT, AND NOSE, BRISBANE HOSPITAL
FOR SICK CHILDREN.

CASES of foreign body in the air-passages are sufficiently serious and infrequent to make the two following ones worthy of record. I am indebted to our House Surgeon, Dr. Ashworth, for the careful notes with which he has supplied me.

(1.) Arthur Kelly, aged five years, from Tentfield, New South Wales, was recommended to my care at the Brisbane Hospital for Sick Children by Dr. Phillips, of Warwick, and admitted on October 20th, 1894. Dr. Phillips' telegram stated "Foreign body in the trachea."

History.—About eight or nine weeks previous to admission patient and several other children were playing in a room where maize corn was stored. He came running suddenly out of the room, coughing and holding his throat, and in the doorway half fell in a fit of choking. For some eight or ten days he suffered from severe paroxysmal attacks of coughing, with much dyspnoea, even to lividity of face. The intervals between the paroxysms varied from ten minutes to half-an-hour. Some improvement occurred under treatment, but only to be followed by relapses. He never lost his voice, but it has been hoarse at times. Once or twice he coughed up a little blood. Breathing has been stridulous and some recession of the ribs has been noticed. Lately there has been much orthopnoea. Other symptoms are thirst, anorexia, broken sleep, general wasting, and somewhat constipated bowels.

Examination on admission at 9.30 a.m., 20th October. Temperature, 99.6. Pulse, 138. Respiration, 36. Tongue slightly furred and rather dry. Breathing somewhat stridulous. Boy can speak, and his voice is not markedly hoarse. There is considerable wasting, and the veins over the chest are sketched out. Heart

natural. Lungs anteriorly—percussion, perhaps, a little diminished in resonance on the right side. Auscultation—Ronchi all over chest, especially on the left side. Lungs posteriorly.—Percussion fair and about equal. Auscultation, ronchi sonorous, and sibilant all over chest; occasional moist sounds. The boy was at once put in a blanket-tent bed, and a steam kettle set going. A jacket poultice was applied at 12 noon. The temperature rose steadily. I saw him at about four o'clock. Temperature had risen to 103° F. There was now dulness on percussion at the base of the left lung posteriorly with crepitations. This we ascribed to catarrhal pneumonia.

Laryngoscopic examination revealed that the larynx contained no foreign body. Dr. Ashworth administred chloroform, and we then inverted him without result. I therefore proceeded to perform tracheotomy, and in doing this encountered quite unexpected difficulty, which adds to the interest of the case. Two anterior jugular veins were at once recognised, and required dividing between two ligatures. I first tried to do a high tracheotomy, but came upon an indurated isthmus, which was firmly connected with the trachea and would not allow itself to be pushed downwards. An endeavour was then made to do a low operation, but the enlarged isthmus made this also impossible, as it reached to the manubrium, being quite an inch in breadth. It was, in fact, a goitrous isthmus. In attempting to pass a double ligature around it by means of an aneurism needle, I must have wounded its posterior surface, as a quite free flow of venous blood occurred. It proved to be very vascular as well as very firm and indurated. The bleeding was so free that I had to divide the isthmus as quickly as possible, and did this by taking a grip of its upper fourth on each side of the middle line with Spencer Wells' forceps, dividing between these, and then by applying forceps in like manner to each of the other fourths; eight forceps in all. Each side of the divided isthmus was then transfixed with a double thread of strong chromic cat-gut and tied above and below, after which the eight forceps were removed. The trachea was now reached fairly easily, though distinct force was required to separate the ends of the divided isthmus on account of its thickness and firmness. The tracheal wound was held open with Trouseau's forceps for a few minutes, but the coughing only brought up a considerable quantity of mucopurulent secretion. The tube was, therefore, introduced and he was put back to bed, steam continued, an expectorant mixture ordered, and poultices applied to the left chest. He remained *in statu quo* for the next two days, his temperature being 102 to 103 in the evenings, and lower

in the mornings. It was not expected that the corn, if there, could be expelled through the tube, but we thought it better to delay a few days before interfering further. On October 23rd he was again put under chloroform, and the tube was removed completely. Simultaneously with its removal he made a strong expiratory effort, and a full-sized grain of maize corn followed it out of the wound. The tube was not reintroduced, and the boy made an uninterrupted recovery. The pneumonic condition at the left base cleared up slowly but completely. The temperature sank to normal five days after expulsion of the corn, and remained there.

(2.) Florence Ingram, aged three years and two months, was admitted on November 20th, 1894, to my care, at the Brisbane Hospital for Sick Children.

History.—Three days previously she was seized with a sudden fit of coughing and choking. Other children said that she had been chewing maize corn. Her mother thrust her finger down her throat, without result; then ipecacuanha wine was given, and, in the resulting vomit, were some scraps of maize, which seemed to have been chewed. Since then she has been coughing and wheezing, and "breathing tight in the chest," also groaning a little. She has suffered from anorexia and loss of sleep, though, strange to say, she slept fairly well on the first night. Has had no pain, and only one fit of choking. Bowels not opened for three days.

On admission.—Voice not altered; temperature 102deg.; pulse, 150; respiration, 80; heart, clear. Lungs, anteriorly—Percussion gives fair note, but impaired somewhat on the left side. Auscultation.—Entry of air deficient on left side; ronchi, chiefly sibilant, over both lungs. On the left side there is a peculiar and very marked click towards, but distinctly before, the end of inspiration. Lungs, posteriorly—Percussion fair, and nearly equal, but in favour of right side. Auscultation—Breath sounds deficient over the lower half of the left lung. Over the upper half, breath sounds a little less than on right. Ronchi, chiefly sibilant over both lungs. Cough extremely troublesome; child much prefers to lie on the left side. She was treated much as the other child. As no improvement occurred, low tracheotomy was performed on the fourth day after admission. The operation was uneventful, and, as no foreign body was obtained, the tube was introduced, and the child returned to bed. The peculiar clicking sound during inspiration was no longer heard 48 hours after the operation, and the expansion of the left side had increased, the breath-sounds being less distinctly deficient. The peculiar clicking sound referred to was such

as could have been produced by a solid body in the inspired stream of air suddenly coming to a standstill and blocking a tube. Two days after the operation chloroform was again administered, and the tube extracted, as in the other case, followed by inversion, but without result. On the following day, however, she coughed up through the tube several yellow, hard, granular-looking bodies, which, in appearance, resembled the hard-boiled yolk of an egg, or chewed maize. The child had been fed entirely upon milk, and the bodies were too hard for egg yolk. Microscopic examination showed them to be at least partly composed of bodies like starch-grains, and strong iodine stained them of a black-blue colour, weak iodine solution staining them of a violet-blue. She improved from this date (27th Nov.), and the bronchitic sounds cleared up. As the cough had ceased, and the deficient vesicular murmur could no longer be recognised on December 4th, and as the temperature, which had fallen to normal on the 28th November, had remained there, the tube was left out—viz., seven days after the pieces of maize had been coughed up. During the subsequent fortnight she had occasional rises of temperature, without any cough or chest symptom. She was retained in hospital until these had ceased, and discharged, apparently well, on December 23rd.

Remarks.—The first case, in addition to illustrating how formidable an operation tracheotomy may sometimes be, shows us that so large a body as a grain of maize corn may remain in the trachea and bronchi of a child of five years for eight or nine weeks without leading to fatal trouble. It seems to me also to point out the best procedure in such cases—viz., the performance of tracheotomy, without previous inversion, the tracheal wound being at the time of operation held open with Trousseau's forceps, in case the foreign body may be immediately coughed out; inversion being practised or not as seems advisable. In the event of want of success immediately following the operation, this case has made me conclude that, unless pressing symptoms arise, it is well to leave the tube undisturbed for two or three days; that a fair-sized and rounded opening in the trachea, with smooth edges, may be formed, i.e., an opening large enough to permit the body to pass easily through. If by this time it be lying in the trachea, it will probably follow the simultaneous removal of both tracheotomy tubes, provided that a strong expiratory effort be induced at the same time. Further, it is only fair to argue that with a tracheotomy tube in the trachea, there will be not only less resistance to expiratory air and its contents than to inspiratory air and its contents, but

that the difference in resistance will be greater than that existing during respiration through the glottis itself. If this be granted there will be a constant tendency for the foreign body to follow the expiratory current, i.e., to go the way of least resistance. Provided, therefore, that it has been in a bronchus at the time of operation, rest in bed with a tracheotomy tube in the trachea, especially when combined with fits of coughing, will tend to dislodge it towards the tracheal wound. I do not affirm that the corn-grain was constantly in the left bronchus previous to operation, though I have no doubt it was sometimes, if not chiefly there. I think, indeed, that there would have been more distinct signs of deficient expansion on the left side had the corn been fixed in the left bronchus, whereas we could not satisfy ourselves that expansion was diminished beyond the extent which the pneumonia at the left base would have led us to expect. The points of interest in the second case are—first, the history that the child had been *chewing* corn, and the possibility, therefore, that only chewed portions had passed the glottis. Second, the fact that there were bronchitic sounds on both sides of the chest, but a distinct deficiency of expansion on the left side, accompanied by the sound described during the act of inspiration. We delayed operating for four days, in the hope that only pieces of corn had entered the glottis, and that those might be coughed up. As no improvement occurred and as the constant coughing was very troublesome and exhausting, we decided upon tracheotomy.

We remarked particularly, that the maize grain in the first case had undergone no apparent change. It was barely swollen. In this it contrasted markedly with a corn which I removed within the last week, from the nose of a child. It was swollen to quite twice its natural size. The fact that in both of these cases the foreign body chose the left bronchus is curious, as it more frequently finds its way into the right in the proportion of twenty-six to fifteen of Bourdillat's cases.* The tendency to prefer the right bronchus is explained by this being, though shorter and more horizontal, of larger size than the left, and therefore, more a continuation of the trachea. Goodall, of Dublin, long ago pointed out that the septum placed at the bottom of the trachea and separating the two bronchi is situated to the left of the median line. The fact that the left bronchus is usually less horizontal than the right, and therefore more in a line with the trachea, must have induced the maize to choose it in these cases.

Bosworth† combines the statistics collected by Gross, Durham, and Weist, in all 1,674 cases

* "Gazette Medical," 1861, p. 135.

† "Diseases of the Nose and Throat."

of foreign body in the air passages. An analysis of these shows that without operation death occurred in 28·6 per cent. and in 25 per cent. of those operated upon. Bosworth further points out that there seems to be no limit to the time in which voluntary expulsion may take place. In Durham's cases this occurred on the first day in 6, in from 1 to 8 days in 12, from 8 to 30 days in 19, from 30 days and a year in 68, and in from 1 to 17 years in 31, while Gross reports an instance in which a piece of bone was expelled after 60 years' retention.

Of Gross's 29 non-operated fatal cases, 8 died after the expulsion of the foreign body, which point is urged by Bosworth as in favour of operative versus expectant treatment. I would not again try inversion previous to operation, without having an intubation apparatus very handy. Had the corn in my first case come into the larynx and caused spasm of the glottis, it would have been impossible to have saved the child's life by tracheotomy, because of the large isthmus. Only intubation or a rapid laryngotomy would have answered. If inversion is to be practised prior to operation* Padley's plan seems certainly the best. He placed the patient sitting on the end of a bench or form, with his legs hanging over. The end of the form was then raised, and the patient made to lie backwards upon it. The coin which had been present in his trachea at once dropped into his mouth. Had it caused spasm of the glottis by coming in contact with the sensitive posterior wall of the trachea and larynx the sudden resumption of the sitting posture would probably have directed it forwards against the less sensitive anterior wall, with a resulting relaxation of the glottis spasm.

CLINICAL MEMORANDUM.

VARICOCELE IN SCROTUM.

By HARVEY NICKOLL, L.R.C.P., L.R.C.S., OF MUDGEE, NEW SOUTH WALES.

J. C., aged 21, consulted me in January, '93, about a constant and severe pain in left testicle, which extended up the cord. When he worked it became unbearable, and frequently kept him awake at nights. Up to eighteen months ago he had masturbated; his brother informed me that of late he had noticed that his brother was getting very low-spirited.

On examination, I could not find anything unusual with the testicle, nor any sign of varicocele, though the patient insisted that there was a swelling. I ordered him some strychnine, and to wear a suspender, and bath in cold water night

and morning. He came back in August very much worse, the pain, whether he worked or not, being constant. He told me that after walking about for an hour the swelling could be easily noticed. I was then able to detect a slight varicocele, and told him to walk about the following morning, and I would operate if the swelling had increased. The next day, a small varicocele was quite evident. I made an incision in the scrotum, dissected out the veins, ligatured them close to the testicle and higher up with strong gut, cut away the intermediate part, tied the cut ends of the veins together, and sewed up the wound in the scrotum. He was able to get up in a week, and went home in twelve days. I saw him six months afterwards; he was quite well, and told me that he started shearing ten days after he went home. I believe it is very unusual for so small a varicocele to give rise to such severe symptoms, and it is owing to this fact that I think the above case may be of sufficient interest to the readers of the *A.M.*

EXTRACTS FROM FOREIGN CURRENT MEDICAL LITERATURE.

By C. A. SALTMAN, M.B., F.R.C.S.E., OF PORT LINCOLN, SOUTH AUSTRALIA.

THE CAUSES AND INCREASE OF GENERAL PARALYSIS.—R. v. Krafft-Ebing (*Allg. Med. Centralzeitung*, No. 36), contributes an article on the above subject. He remarks that, since, in spite of the well-marked symptoms of general paralysis, accounts of it in medical literature are found only towards the close of the eighteenth century, it must be looked upon as a disease of the present century, and as having its causes in the sociological conditions of the present times. Moreover, a real increase in the prevalence of the disease can be proved. The almost unanimous experience of alienists is that general paralysis is on the increase amongst the civilized nations, whilst the milder functional mental disorders (*Psychonuroses*) show a corresponding decrease. And this is the case, although the disease has at present a tendency to assume the quiet, simple atrophic form, which can be more easily treated at home, so that the figures furnished by the asylums are much below the actual numbers. Moreau, in 1850, was the first to show that there was an increase of general paralysis in the large asylums of Paris. Régis reported in 1885 that in some of the French asylums the increase amounted to 33 per cent. Snell, of Hildesheim, finds that the relative number of paralytics has almost doubled itself, and, according to Thomsen, the percentage in the Berliner Charité has risen during the years 1880-1885 from 27 per cent. to 35 per cent. Figures furnished by Althaus, of London, show a similar increase in England. Speaking of the causes, in addition to the generally-recognised ones, *e.g.*, excesses of all kinds, Krafft-Ebing assigns a very important place to syphilis, and quotes Rieger, of Würzburg, who found that in 1,000 non-paralytic mental cases, only 39 had a history of syphilis; whilst of 1,000 paralytics, 400 had had syphilis. But the majority of investigators give even a higher percentage, *e.g.*, Oebeke, who, amongst the upper classes, found it to reach 73 per cent., but in the lower, it amounted to only 16·7 per

* *British Medical Journal*, Nov. 6th, 1873, p. 721.

cent. The paralysis most frequently manifests itself between the fifth and fifteenth years after infection, which partially explains why its victims are generally in the middle of life.

GLYCOGEN IN TUMOURS.—M. A. Brault (*La Semaine Médicale*, November 17th, 1894), remembering the similarity of structure between tumours and embryonic tissues, and the fact that Claud Bernard had proved the presence of glycogen in several of the organs of the embryo, was led to look for the existence of glycogen in tumours, and he found that this substance was present in a great number of neoplasms which he examined, and that its amount was exactly in proportion to the rapidity of the development of the tumour. Fifty-five tumours of rapid growth, such as sarcomata and carcinomata of the testicle, carcinomata of the tongue, uterus, &c., were found to be rich in glycogen. The majority of these had grown rapidly, and acquired a considerable volume in a short time. In 84 tumours of slower growth, glycogen was found only in the regions of their formation and spreading. The presence of glycogen in a tumour is therefore of considerable importance from a diagnostic and prognostic point of view.

A NEW TREATMENT OF WHOOPING-COUGH.—Dr. Raubitschek (*Therapeutische Monatshefte*, April, '94) having, during a fifteen years' practice, made use of all the usual remedies for whooping-cough, but without satisfactory results, was induced to try the effect of painting the throat with a solution of perchloride. The result was very satisfactory. He applied this treatment to fourteen cases, and they were either completely cured or considerably benefited within periods varying from eight to sixteen days. In the milder cases, improvement commenced on the second or third day. The solution is applied as follows:—A small pledget of cotton wool, or brush, is well soaked with a 1 in 1000 solution, and pressed against the back of the tongue, so that the epiglottis and neighbouring parts are thoroughly moistened with the solution; on withdrawing, the pledget is brushed over the tonsils and uvula. In severe cases the application is made once a day; in lighter ones, every second day.

DEATH CAUSED BY AN ENEMA OF A 3 PER CENT. SOLUTION OF CARBOLIC ACID.—A student, *et. 21*, consulted a medical man for threadworms (*Der Praktische Arzt*, July, '94) and received the following prescription:—"R. Ac. Carbol. liq. 100 grammes. Sig: 80 grammes to a litre of water for one enema." On returning home, the deceased procured some water and retired to a W.C. for the purpose of using the injection. One hour and a-half afterwards he was found dead on the floor of the W.C. The bottle of carbolie, with about 80 grammes gone, found in the place, as well as other circumstances, pointed pretty clearly to the fact that he had used the enema as directed. At the inquest, five experts, including an analytical chemist, deposed that death had been caused by carbolie acid poisoning, and that a 3 per cent. solution was too strong for rectal injection. The medical man was found guilty of manslaughter, and sentenced to six weeks' imprisonment.

LYSIDINE IN GOUT.—Ladenburg's Lysidine (*Les Nouveaux Remèdes*, December 8th, 1894) is a crystalline, reddish-white, very hygroscopic substance, with a somewhat disagreeable taste, and readily soluble in water. It melts at 105 degrees C., and boils at 108 degrees C. Ladenburg recommends it as being non-poisonous, and as having a solvent power on urates five times greater than that of piperazine. E. Grawitz, on Ladenburg's

recommendation, tried it in two cases of gout, one acute, the other chronic, giving it dissolved in aerated water, in daily doses gradually increased from one to five grammes. The patients took it well, especially when given cold or iced, and sufficiently diluted (1 in 100 or more). There were no untoward secondary effects of any kind, no digestive troubles, no anomalies in the secretion of urine, no albuminuria, &c. There was no distaste for the remedy, even if long continued. Its action on the gout was marked. The pains ceased in a short time, the tophi diminished considerably, and the articulations became supple and mobile. The appetite remained good, and there was an increase of body-weight during the treatment. Lysidine failed completely in a case of polyarticular rheumatism, but where antipyrine gave quick relief.

THE ABSORPTION OF PLEURITIC EFFUSIONS AFTER HYPODERMIC PUNCTURE.—Dr. F. Jordan (*Allg. Med. Centralzeitung*, No. 32, '94) draws attention to a new procedure, which, on account of its simplicity and harmlessness, deserves to be better known and studied. Jordan, in investigating the therapeutic effect of various surgical measures on pleuritic effusions, noticed that the quantity of urine increased very considerably after having made an exploratory puncture with a hypodermic syringe. This observation he made in the first instance on four patients, and not being able to account for the increased flow of urine in any other way except as the result of the exploratory puncture, he repeated the process on 15 other pleuritic cases, with the same result. The quantity of urine, which before the operation had amounted to 200-300 cms, increased after it to 2,000, or even 5,000 cms. This diuretic effect showed itself about two or three days after puncture, but sometimes not until the eighth or ninth day, and continued until the whole of the effusion had disappeared. Twelve of the cases were chronic, with serous effusion, and three acute (two serous and one hæmorrhagic). The amount of the effusion was in all cases "more than mediumly large," and in two it reached to the second and third ribs respectively. The diuresis was accompanied by an abatement of the temperature. It took on the average about two months to complete recovery. In one of the acute cases with large effusion, five weeks after the operation only traces of the effusion could be discovered. Jordan does not give any satisfactory explanation of the *modus operandi* of the procedure.

ON THE OXYTOIC ACTION OF SALICYLIC ACID AND ITS COMPOUNDS.—Hiram Vineberg (*Gazette de Gynecologie*, December 1st, 1894), from observations of his own on the human subject, and from the experiments of C. Bing on the guinea-pig, concludes as follows, regarding the oxytocic action of salicylic acid:—(1.) Salicylic acid and its compounds may be advantageously administered in cases of scanty or retarded menstruation. (2.) They ought not to be given to females who have a tendency to abort, or to those suffering from menorrhagia or metrorrhagia. (3.) Their administration must be carefully watched in cases of pregnancy, and they must be immediately suspended on the least sign of pain or labour.

ASPHYXIA IN THE DUCK.—M. Richet (*La Semaine Médicale*, November 21st, 1894) finds that a healthy duck will live under water for nine minutes. When bled, it does not resist quite so long; and if previous to immersion .015 mgr. of atropine are injected so as to act on the pneumogastric, life will only last three minutes.

Port Lincoln, S.A., Jan. 29, 1895.

PROCEEDINGS OF BRANCHES.

SPECIAL NOTICE.

The Australasian Medical Gazette is supplied to all Members of the N. S. Wales, South Australian, and Victorian Branches Free of Cost. After the delivery of the March Issue, however, no member whose subscription to his branch for the current year remains unpaid shall be supplied with any further copies of the Gazette until the said subscription shall have been paid. The respective councils do not hold themselves responsible for the supply of back numbers which under this rule may have been undelivered.

Subscription should be forwarded to the respective branch treasurers as below—

New South Wales, Dr. Clubb, College-st., Hyde Park, Sydney; South Australia, Dr. T. W. Corbin, King William-st., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

ORDINARY monthly meeting held at the Austral Salon, Melbourne, on Wednesday, January 30th. Present: The President (Dr. Snowball) in the chair; Drs. A. L. Kenny, Mullen, Gardner, S. J. Read, Gray, Springthorpe, M'Adam, Naylor, Kent-Hughes, Boyd, Henry, Black, J. R. Thomson, Loosli, and J. Johnston.

The minutes of the previous ordinary and special meetings were read and confirmed. Dr. Neild wrote forwarding a letter from the widow of the late Dr. Graham, offering to present a number of books, periodicals, and papers to the Branch. The offer was accepted with thanks. The hon. secretary notified that three cases of books were shortly expected from the Home authorities, and the president intimated that the question of securing a room for a library, etc., would shortly be considered by the council.

Dr. GRAY gave notice of motion "That henceforth there be no meetings of the Branch in January or February."

Dr. M'ADAM then read the following:—

BRIEF NOTES FROM RECENT PRACTICE.

By R. L. M'ADAM, B.A., M.D., CH. B., D.P.H.,
OF ST. KILDA, MELBOURNE.

THE following brief notes are presented to you to-night in the hope that they may prove of some little interest. They make no pretensions to elaboration; they seek to enunciate no new principles either in pathology or treatment; they are simply a record of experiences which I have but lately met with, and of which, I thought, a passing notice may not be taken amiss. And I could wish that those of us, like myself, in general practice would give us often, even in the form of brief notes a recital of the many things of interest which must, doubtless, from time to time come within the range of their observation.

A man is often tempted, 'mid the rush and hurry and the multifarious demands of our arduous profession, to forget that even a brief contribution to knowledge is better than none at all, and that he owes it as a duty to himself and to his fellows to let no fact or series of facts of even the least importance slip by him unrecorded into the limbo of forgotten things.

The first case to which I would ask your attention is one of spina bifida, with unusual absence of cranial sutures. In September last year I was called to see the infant of a Mrs. C., of which she had been delivered, at full term, three days before by a midwife. The child was a male, small, but fairly well nourished. The reason for calling me in was soon apparent; there was a large tumour of peculiar formation on the boy's back, occupying the position of nearly all the lumbar vertebræ. The growth was of bluish-purple tint, with a somewhat glazed appearance, and distinct translucency. It was sessile, and measured nearly six inches in circumference, being roughly circular, or rather ovoid in shape. Its long diameter was transverse, and the arc it subtended measured three inches; while a similar measurement taken in the vertical diameter was two and three-quarter inches. At the upper portion of the tumour there was an abraded surface about the size of a two-shilling piece, and looking very raw and sore. About half-an-inch lower down was a pin-hole aperture from which a watery fluid was exuding. When the child was held upright, and particularly if it were made to cry, the tumour swelled, and its covering became more tense and glazed. The finger sunk into the substance of the growth when pressure was made, and a fissure at its bottom was, on careful examination, evident to the touch. It was scarcely necessary to examine the fluid before arriving at the diagnosis of a spina bifida, though this, too, was done. The woman in attendance stated that the abrasion was present when the child was born, and that the tumour had grown larger and had been leaking ever since.

I next examined the child's head. None of the larger sutures were present. Beginning at the root of the nose, one could insert a finger into a gap between the two lateral halves of the frontal bone. Travelling still further up the skull, no sagittal suture was found—there was present, instead, an interval in which one could place two fingers. This was continued away back to the lambdoid suture, or rather the place where the lambdoid suture is usually found, for it, too, was deficient. The coronal suture was also non-existent; while at the squamous suture, though the bones approximated, there was no absolute union. Where the anterior fontanelle

should have been, there was some bulging, which disappeared on pressure, but quickly returned when pressure was removed. The lower extremities were rigid and motionless, with a complete absence of plantar reflexes and knee jerks. I sealed up the leak with collodion, and dressed the abraded surface antiseptically. Four days after, I injected into the tumour in. 30 of Morton's Iodo glycerine solution, having first withdrawn the same quantity of fluid. There was no appreciable effect. Two days elapsed, and I injected in. 60 of the same fluid. From this dose there was a reaction, and some febrile disturbance occurred, the child refused the breast, and became very cross and peevish. Two more injections of in. 30 each were given at intervals of two and three days. A little while passed by, and a marked change took place in the tumour. The glazed appearance vanished, and well-marked wrinkles showed that the tension of the fluid had ceased to cause the walls to bulge. Its substance, too, became more solid and resistant to the touch, and it was quite evident that there was no longer a communication with the cerebro-spinal cavity.

The next scene in the clinical history was ushered in by the occurrence of convulsions, squint, persistent and peculiar crying with vomiting. It was almost impossible to make the child take any food, even in the smallest quantities, and for three weeks he managed to subsist on less than a tablespoonful of sweet diluted milk in the twenty-four hours. Diarrhoea next set in, and long periods of unconsciousness, during which it was sometimes difficult to say whether he was alive or dead. Out of these he would arouse, however, from time to time, only to be torn by another fierce convulsive storm. At length, after a life of forty days, his sufferings were ended by death. At this time, he was literally a mass of skin and bone, and it seemed marvellous that the approaching end had been so long in coming.

The next case with which I will deal is very different both in its nature and *denouement*. It is one in which the presence of an *ascaris lumbricoides* in the stomach appears to have given rise to well-marked symptoms, simulating a very grave form of dyspepsia—perhaps even gastric ulcer.

On the 24th August last year, I was called to see a Mrs. W., a lady about thirty. She had for a couple of months previously been suffering a good deal, and had been under the care of another medical man. His efforts to relieve her were apparently unsuccessful, and he finally told her and her husband that he could do no

more for her—that she was pregnant, and, until pregnancy was over, would continue to suffer as she had been doing. I elicited a history which pointed unmistakably to severe digestive disturbance attended with intense gastralgia. The physical condition generally gave ample testimony as to the truth of this supposition. Acting on it, I accordingly gave orders for dieting the patient very carefully, and sent her to bed. I administered large doses of bismuth, with opium and other sedatives. The results were entirely satisfactory, and in less than three weeks the patient said she felt herself as well as ever, and was able gradually to resume her ordinary diet and habits of life.

Just two months after I ceased my attendance, Mrs. W. having meanwhile been perfectly well, the following rather startling occurrence took place. On the evening of the 14th November, her husband returned from his business in Melbourne to find her again complaining of the old pain. She told him she thought it was due to flatulence, and he gave her a mixture of gin and peppermint. This somewhat relieved her, and he left her for a moment or two. While he was away, the pain recurred with agonising violence. She felt a great desire to vomit, but could not do so. She took more gin and peppermint, which caused momentary relief. Once more, however, the pain returned, worse than ever, and the impulse to vomit was likewise felt. This effort was successful and brought up the contents of her stomach. Great was her horror to find a long wriggling creature hang for a few moments from her mouth and then fall with a thud into the chamber utensil, where it continued its movements for some time.

Upon examination, I found the worm to be a female *ascaris lumbricoides*, measuring 13 inches in length. I gave large doses of santonine for some days, without, however, detecting the presence of any more of these troublesome gentry. The patient assures me that before the expulsion of the parasite she never felt her hunger satisfied, no matter how full a meal she ate, but that since that event she has not experienced this feeling. Indeed, she has since had no trouble of any kind, except the occurrence of a very easy and speedy labour, which took place in the middle of December. She now enjoys unexceptionable health.

I can scarcely refrain from thinking that the *ascaris* was the cause of the former gastric storms. But it is difficult to account for its having lain *perdu* for two months, unless on the supposition that it had for that time withdrawn itself from the stomach into the intestines.

Then, on its once more venturing on a voyage into the stomach, caused the sudden expulsion which terminated its existence.

As to etiology, there is a history of great fondness for, and frequent indulgence in, salads. There is also some suspicion that the drinking of raw tap-waters may have been the real *ans et origo mali*.

Let me next allude to a case of prolonged ischuria, following labour. The patient was a primipara, aged 22. Labour was somewhat tedious, in consequence of a very narrow vulvar orifice, which stoutly withstood the attempts at dilatation which the advancing head was making. At length I felt convinced that there was no likelihood of the integrity of the perinæum being preserved if the head was to be allowed to gain an exit unassisted by art. I therefore made two lateral incisions. It is a practice I do not hesitate to adopt, and have found of the greatest value in cases like this under notice. The results were most satisfactory, as in consequence of the incisions the case soon terminated. Before leaving, I gave the usual instructions to the nurse to see that the patient passed water at the end of six hours. On visiting next morning, some fourteen hours later, I found that no urine had been passed, though several attempts had been made to do so. I accordingly used a catheter, with all antiseptic precautions, and drew off over a pint of urine. I noticed, in doing this, that there was an absence of force in its expulsion; indeed, the only thing that made any alteration in its rate of flow was the rise and fall of the diaphragm in respiration. The secretion was high-coloured, extremely acid, and of a most unpleasant odour. There was no pus, nor was there a great excess of mucus present. After this time, in spite of belladonna and other drugs, and hot applications to the hypogastrium, there was no voluntary passage of urine for ten days. During this period the urine continued to be more or less unpleasant in its odour, but there was no evidence of cystitis. However, four days after the power of voluntary micturition returned, unmistakable symptoms of inflammatory mischief in the bladder set in. There were hypogastric pains and tenderness on pressure, frequency of micturition, attended with a burning feeling in the urethra; pus, and excess of mucus in the urine, and, on one or two occasions, a little blood. However, on washing out the bladder with permanganate solution, a marked improvement took place, and a continuance of this treatment for two days, followed later on by irrigation of the viscus with resorcin, half per cent., and the internal administration of

salol, combined with an exclusive milk diet, proved so successful that in less than a week matters had resumed their usual healthy condition.

This case is noteworthy—first, because of the length of time during which the bladder was unable to perform its functions; and secondly, from the fact that its loss of power would appear to be due to the pressure of the child's head during labour having caused some injury to the nervous mechanism of the organ. To this, I think, must be attributed the paralysis of the bladder and the subsequent cystitis from which the patient suffered; for I cannot reproach myself for having in any respect failed in all due antiseptic precautions during my ten days of catheterisation.

The next and last case to which I shall allude will be a very brief one. It is one of conjunctivitis, due to an unusual cause. Late on the night of the 14th inst. an infant seven months old was brought to me, with the following history:—For a couple of days it had been extremely cross and out of sorts, and seemed to be suffering considerable pain in connection with what appeared to be some inflammatory trouble in the left eye. It had not slept at all during the previous night or day. On examining the eye in question, I found both lids swollen and red, and a condition of blepharospasm present. The ocular conjunctiva was much inflamed; there was considerable lachrymation, and some muco-pus. Everting, with some trouble, the lower lid, I was surprised to see two moving masses of considerable size occupying the *cul de sac*. There was little difficulty in recognising that they were maggots, and, after a moment or two, I was successful in evicting them from their lair. The child got relief at once, and, wearied out, was soon asleep. In a day or two the conjunctival irritation disappeared, and the eye was as well as ever. It is the first time that I have come across a case in which the eggs of blow-flies have gained access to the conjunctival sac, and such a cause for conjunctivitis is, I think, of rare if not unique occurrence.

Dr. KENNY welcomed such papers as that just read. He did not know of any eye case similar to that recorded by Dr. M'ADAM.

Dr. GARDNER also welcomed the reading of such "Notes." The size of the opening from the spina bifida into the canal was the important point re Morton's fluid—if small, its use gave good results; if large, operation was better.

The PRESIDENT congratulated Dr. M'Adam on giving the Branch a "live" paper. In spina bifida, he followed three general rules for discarding Morton's fluid, *e.g.*, where there was paralysis, where there was a large opening, and where there was hydrocephalus.

He had noticed a great tendency to acquired hydrocephalus, even after improvement in the spina bifida. Transplanting the periosteum was also a failure.

Dr. M'ADAM, in reply, said he had no choice but to use Morton's fluid, and the sac was too tense to allow of definite determination of size of opening.

Dr. SPRINGTHORPE then read the following paper:—

SIX INSTANCES OF THE USE OF DIPHThERIA ANTI-TOXIN.*

By J. W. SPRINGTHORPE, M.A., M.D., M.R.C.P.,
PHYSICIAN TO THE MELBOURNE HOSPITAL.

1.—C.S., a healthy boy, aged 10½, admitted into the Melbourne Hospital on September 29, 1894. The previous day he had attended the Children's Hospital, and was pronounced to be a case of diphtheria. He gave a history of four or five days' illness. Examination showed tonsils and pharynx covered with wash-leather membrane, glandular enlargement, and temp. 102 deg. At 3 p.m. he was injected with 5cc. Roux anti-toxin. By next morning temp. was normal, and throat almost free from membrane. By the following morning the throat was quite free; after the injection his general state was exceptionally good. The only other treatment adopted was a spray of lactic acid and lime-water every four hours. During convalescence he contracted scarlatina of a mild type, so that he was not discharged until November 10th. Throughout he gave no trouble or anxiety.

2, 3, and 4 occurred in the one family. All were healthy children, but had suffered from pertussis the previous winter.

2.—S. S., boy aged 2½, taken ill suddenly on November 18th. When seen by Dr. Inglis, of Kew, on the 20th, was found to be suffering from laryngeal diphtheria. He was admitted to hospital the next morning; he had then a temp. 100·2, resp. 40, pulse 160. He was cyanosed with retraction of intercostal spaces, stridor, dyspnoea and dysphagia, discharge from nose and some epistaxis. Entry of air was impeded, especially into the right lung, the uvula and tonsils were covered with membrane. He was at once injected with 5cc. of the serum, but never rallied, and died at 3 next morning. Post mortem: membrane was found extending from the fauces to the small bronchi.

3.—G. S., brother of the last, aged 4½, examined on the 20th by Dr. Inglis, without any sign of membrane. Next day, however, membrane was seen on the fauces, and by the 22nd it had extended to the larynx. That night he

was injected with 2½ cc. of the serum, and removed to the hospital the following morning. On admission, there was stridor, retraction of intercostals, and membrane on tonsils and pharynx, temp. was 100·6, resp. 30, pulse 150. A second injection of 5cc. was given, and the local treatment, insufflations of sulphur continued. There were no signs of any further spread of membrane, but the local obstruction in the larynx became dangerous, and as the membrane did not come up it was decided to perform tracheotomy. This was done on the morning of the 24th, by Dr. Dowling, the resident in charge of the infectious ward. Immediately after the operation a third injection of 5cc. anti-toxin was given, the throat sprayed from time to time with boracic spray, and the tent kept faintly impregnated with eucalyptus spray. The trachea was cleansed from time to time with a weakly carbolic feather. From an apparently moribund condition the boy obtained immediate relief. He gave no further cause for anxiety; the tube was removed on the fourth day, and he made an uninterrupted recovery.

4.—E. S., sister of the foregoing, aged 5½, had been sent away on the night of the 20th, as a precautionary proceeding, but vomited the following evening, and on being examined next morning, was found to have membrane in the throat and nose, with temp. 100·4. That same evening she, with her brother, was injected with 2½ cc. anti-toxin and sent to the hospital on the 23rd. There was then abundant membrane on the pharynx and tonsils, but apparently none on the larynx. The temp. had fallen to normal. For the next few days the child seemed to be doing so well that no further injections were given, and the only treatment was local insufflation of sulphur. On the 26th, however, there was suspicion of suppuration in the right tonsil, and the temp. rose to 102 deg. The tonsil was punctured, and 5cc. of antitoxin injected. By the evening the temp. was again normal. With the exception of an erythematous rash eleven days later, with a rise of temp. to 102 deg., the little patient made an uninterrupted recovery.

5.—R. L., aged 14, under treatment by Dr. W. Wood, of South Yarra. When seen on November 28th, she had been complaining for four days with sore throat and general malaise; she had then all the appearances of follicular tonsillitis, with slight enlargement of the neck-glands. By December 6th the symptoms had gradually grown worse; the uvula was slightly invaded, but the urine was free from albumen. Dr. Wood's notes continue:—December 8th: pulse 140, resp. 20, much weaker; throat now covered with a thick adherent membrane, tending

* For the sample of anti-toxin used, I am indebted to my friend, M. de Bavy, who obtained it from the Pasteur Institute, through the kindness of M. Roux.

to come off in places, slight stridor in breathing, urine very scant and containing albumen 20 per cent., a dusky hue appearing, very drowsy. That evening at 9 p.m. I injected 5cc. anti-toxin. Patient passed a better night and was less dusky and drowsy. Next morning a second injection of 5 cc. was given; pulse and respirations improved, the throat cleared rapidly, and patient was much brighter. December 10th, 10 a.m.: pulse 80, respirations 18, slept well and naturally, no stridor, albumen less marked, throat almost clean, altogether most satisfactory. 9 p.m.: pulse 90, resp. 36, becoming dusky about the face, pulse rapidly worse. December 11th, 8 a.m.: pulse uncountable, with very rapid respirations; died at 9 a.m.

6.—E. C., aged 3½, admitted into the Melbourne Hospital on December 13th. She came from a house where there were two children suffering from scarlatina. She herself had had scarlatina for five days, and came to hospital for increasing dyspnoea. She had temp. 102·4, pulse 120, resp 28, with some stridor and retraction of lower ribs. On tonsils, uvula and pharynx there was a whitish-grey pellicle, more like sloughing mucous membrane than exudation. Believing in the virtue of anti-toxin, Dr Williams, under whom the case was admitted, was good enough to place it under my care. Though there were grave doubts as to the diphtheritic nature of the throat, it was decided to try an injection of anti-toxin, and 5cc. were accordingly injected. Next morning the child was much worse. Tracheotomy was performed by Dr. Dowling, death being averted only after artificial respiration and injections of strychnine. A further injection of 5cc. anti-toxin was then given, but patient died the same day. *Post mortem*: Dr. Mollison reports the tonsils sloughing, no membrane in trachea or larynx, but muco-pus from bronchi into lung substance, and congestion, but no true consolidation of lungs; on the uvula there was a small patch of adherent membrane, the kidneys appeared normal, the liver firm, the spleen firm and enlarged, and the heart sound.

After the excellent papers by Roux, Aronson, Behring, Kossell, Turner, Hart, Sims-Woodhead, Klein, &c., and the numerous reports which have appeared in current medical journals, it would be inexcusable for me to dwell upon the *rationale* of the serum treatment, or upon the results so far recorded. No medical matter has aroused so much interest in or out of the profession since tuberculin. It will be remembered that in Behring's, Aronson's, Roux's, Ruffer's, and Klein's anti-toxins, we have different preparations, of different and even varying strengths,

hence requiring different and even varying doses. In the case of Klein's anti-toxin, there is also a striking contrast in the method of preparation, which suggests (if successful) a widening of our conception as to the *modus operandi*. The requirement of a bacteriological test for diphtheria marks a great and suggestive advance in our diagnostic procedure. We are already struck with the large number of cases of pseudo-diphtheria—one-seventh of the 280 cases examined by the New York Board. The interest of this is much more than statistical, since, prognostically, the mortality varies in the one from 0 to 20 per cent., and in the other from 25 to 75 per cent., whilst, preventatively, the test enables us to keep suspected cases separate from true diphtheritic cases. The rapidity of the test—within 24 hours as a rule—is another point in its favour. The use of the test also at the close of the disease, as practised in New York, to prevent premature liberation of infected persons, suggests new and important preventative possibilities. Further, the presence or absence of other bacilli, cocci, &c., prepares us for the failure or success of the serum treatment, and points out the advisability or the reverse of forthwith adopting other remedial measures. Little wonder, therefore, that the Local Government Board of England have followed continental and American authorities in undertaking this important matter. Another point worthy of mention is the necessity for sterile syringes and pure serum. As regards the former there is, I fear, room for considerable improvement in general practice. As regards the latter, the first responsibility rests upon the maker and the source. This guaranteed, Buchner has shown that the anti-toxins are essentially stable, and experience has proved that diphtheria anti-toxin is potent even after some months. Provided, therefore, it is available in sterilized bottles, containing simply one dose, good results may be confidently expected from imported serum. That oxidation of the albuminous matters of the serum occurs, however, when the serum is stored in Pasteur flasks, is apparent from my own experience, even when careful examination showed continued sterility.

The result of my own experience and reading leads me to the following conclusions:—

(1.) The diphtheria anti-toxin neutralises the toxin secreted by the diphtheria bacillus, but it does not antagonise other toxins. If such are secreted they combine to produce their characteristic effects. What we want, and want badly, are the anti-toxins to the common septic organisms.

(2.) Mainly by the above means, but probably also by some direct action on the diphtheria bacilli, true, uncomplicated diphtheria may be promptly and completely arrested.

(3.) If, however, the toxin has been able to produce structural change—in the rabbit this occurs in seven to ten days—in nerve or other elements, the question of repair depends upon the extent of the damage, and remains apparently uninfluenced by the anti-toxin. And it is from this damage that cases die, and will continue to die, of cardiac failure, &c.

It seems, probable, therefore, that all but very debilitated cases of true uncomplicated diphtheria can be saved by the anti-toxin, provided they are taken in time and a sufficient dose be injected. Both these provisos are essential. In my opinion the case should be treated as urgently as a case of snake-bite, and continued mortality will depend very largely upon delayed administration. Almost as important may be the question of dosage. Henceforward there can be little excuse for mistakes in this particular, since each manufacturer will give full instructions with his particular sample. Until lately, however, there was more or less confusion, and some deaths, at least, seem attributable to insufficient dose. It is probable, also, that after all, the main use of the anti-toxin will be preventive; and that, armed with it, the physician may at least keep the fatal disease within check in his own circle.

Turning to my cases. I regret that, owing to a variety of circumstances, no bacteriological examination was made. With the bacteriological facilities, however, now at our disposal in Melbourne, it will not be long before it will be possible for any practitioner to obtain such examination in any suspected or doubtful case. I have little doubt, however, that Case 1 in my list was one of diphtheria. In all probability it would have done well under ordinary treatment, but the anti-toxin seemed to clear away the membrane with unusual rapidity, and after its injection the general state remained practically normal.

Cases 2, 3, and 4 were undoubtedly diphtheria of a virulent type. Case 2 received, as I now know, too small a dose, but was, I believe, too far gone to recover under any treatment. Case 3 received three small doses—much less than would now be given—and in my opinion was saved from death by the anti-toxin, combined, of course, with a timely tracheotomy. In this connection it is well to remind you how Roux and others think intubation specially indicated rather than tracheotomy in laryngeal cases. Case 4 illustrates at least the *post hoc*, if not the *propter hoc* argument. As in the others, the disease

began in the nose, but the case was injected early, before any laryngeal complication, and after one small dose rapidly recovered. In this case it is interesting to note that an erythematous rash appeared some days after the injection, as has been reported by other observers. Case 5 illustrates the potency and the limitations of the anti-toxin. Even though given after Dr. Wood had pronounced a very grave prognosis, it brought about an improvement which was as striking as it was gratifying; but structural change had already been produced, and to a fatal extent. In addition, the case was probably one of mixed infection, and my dosage far too small. It ranks, I believe, amongst those that will for the future be prevented from ending fatally. Case 6 was not, in my opinion, one of diphtheria, but of scarlatina with putrid angina. What ought, of course, to have been done would have been to have given a large dose of anti-toxin at first, on the chance that diphtheria might be present as a complication, and meantime have a bacteriological examination. I fancy, however, that the patient would have died all the same. I append the charts of the cases. One other point: The combination of anti-toxin hypodermically with large doses of hydrarg. perchloride internally. It seems highly probable that the perchloride in large quantities, freely diluted in water, does in some chemical way antagonise at least some of the diphtheria toxin; and, after consultation with Dr. Bennie, I determined to try the combination. Dr. Bennie, however, has since informed me that it has been found that when both are administered the anti-toxin takes charge of the toxin, and leaves the perchloride uncombined to produce symptoms of mercurialism. Hence the combination is inadmissible.

Dr. GRAY had listened with great pleasure. He would like to know further how old the antitoxin was, and if it retained its power? Would Dr. Springthorpe recommend its use in doubtful cases, and to others in contact with such? Did not age modify the dose?

Dr. HENRY thought the question still in the early stage. Untoward results had been reported. In not strengthening the defensive power, the treatment was in accord with modern ideas. He quoted some original figures to show that with large doses of hydrarg. perchlor., the blood was sufficiently charged to destroy the diphtheritic bacilli.

Dr. BLACK thought the result—two cured out of three, in undoubted and virulent diphtheria—was splendid. He had seen Case 1 before it went to the hospital, and they thought it non-diphtheritic. The paper wanted only bacteriological examination to make it complete. Unlike Dr. Henry, he thought the treatment essentially in accord with the latest views.

Dr. KENNY dwelt upon the imperative need for a bacteriological institute, open to all practitioners for a

small fee. The Board of Health could undertake nothing better. Dr. Henry's simile was fallacious. As regard the efficiency of the treatment, the paper by Drs. Washbourn, Goodall, and Card in the last *B. M. Journal*, was conclusive.

Dr. GARDNER thought that Dr. Springthorpe was in error in regarding the anti-toxin as potent after three or four months. Was it not rather a question of a few weeks?

Dr. ANDERSON asked whether Dr. Springthorpe would rigidly advise preventive injection in all exposed cases? He did not find diphtheria spread to such a rule.

The PRESIDENT congratulated Dr. Springthorpe on his valuable paper. Strangely, he had not seen a case of diphtheria for many months. Without doubt, the antitoxin was a most potent remedy. It had also great diagnostic value, as shown by its effect on temperature and membrane. But, as with tuberculin, too much was expected. It was madness to expect cure where severe structural change had been produced. It should be remembered also that negative bacteriological results remained inconclusive, though positive results were unassailable. The Kew results he regarded as splendid, remembering that all three were of the virulent nasal type. Altogether, he was unusually hopeful about the treatment.

In reply, Dr. SPRINGTHORPE thanked members for their kindly hearing. His sample came straight from the Pasteur Institute, and was about two months old when first used. He had to satisfy himself that it was sterile and potent. The former was easy. The latter seemed justified by results, and was in accord with the experience of others. When there was plenty to hand he would, in view of the risk of infection and the gravity of the disease, advise preventive injection of exposed persons. Meantime, it must suffice to send such away, under daily observation, and inject on the first sign, not waiting even for the result of bacteriological examination. Of course, age modified the dosage, but Roux and Ruffer gave 20 c.c. to very young children, with several daily repetitions of the same, or less dose, according to the case. Roux had given more than 40z. Aronson's (Schering) sample was concentrated, and the dose half to one or more c.c. Behring's was three times the strength. Klein gave 5, 8 or 10 c.c. His own dosage had been too small, from believing that 20 c.c. was the adult dose. All samples were preserved with camphor or phenol compound. As regards untoward effects, such seemed very exceptional, and not due to the anti-toxin. The action of hydrarg. perchlor must be chemical, and not bactericidal, since the bacilli were not present in the blood. He admitted that his first case might not have been diphtheria, but four medical men pronounced it so. Undoubtedly, however, the succeeding four were; and in three the effect was marked. Probably hospital results would continue to show a terrible fatality, because they would be treated too late. In his opinion the physician would shortly carry the anti-toxin about with him, and inject at once. As regards bacteriology, Dr. Cherry (at the University), Dr. Mollison (at the hospital), Dr. McInerney and M. de Bavay (at their private laboratories) could all give reliable results; and if the Board of Health would only supply sterilized tubes to the profession at cost price, much exact information could be at once obtained. The charge of £1 per dose was ridiculously excessive. At present the cost seemed about 1s. 6d. Roux had 140 horses undergoing immunisation; Ruffer and McFadyan expected soon to be able to supply all England, and German and other continental authorities were equally energetic. Like the

President, he had to wait months for a few consecutive cases. He was quite right in his statement as to the anti-toxin remaining potent after some months. Four months was given on the sample shown by the President. It was the immunity which seemed to last only a few weeks at most.

Dr. MULLEN then gave members a brief insight into the working of the Income Tax. He pointed out how the profession in England had for years paid upon their gross receipts, instead of on their net income. He indicated the different items upon which medical men could obtain exemption. It was felt that the information thus afforded would be the means of saving the profession a very large sum, which might otherwise have been ignorantly paid into the public Treasury.

Dr. McAdam showed (a) a perfect fetus, two months; (b) a female ascaris, voided from the stomach of the patient referred to in his paper.

The meeting then adjourned.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MINUTES of the monthly meeting held at the Adelaide Hospital on 31st December, 1895:—Present: The President, Drs. J. K. Hamilton, J. C. Verco, Hayward, A. A. Hamilton, Lermite, Lendon, Teichelmann, Giles, Todd, Symons, Marten, C. Magarey, Poulton, W. A. Verco, Brummitt, Clindening, J. A. G. Hamilton, Perks, Michie, Goldsmith, Robertson, Harrold, Sangster, junr., Irwin, Ewbank, Stewart, and Hon. Sec. (Dr. H. Swift); and as visitors, Drs. G. Hayward, Fisher, Hone, Cudmore, and Goode.

EXHIBITS.

Dr. J. C. VERCO showed a case of "Simple Idiopathic Muscular Atrophy" of the *facio-scapulo-humeral* type. The patient was a man of 49 years. When 22 years old the muscles of the left arm wasted. Twelve months ago his legs became weak, and about two months ago his right arm became affected. A brother in the country has some affection of the arms, of a similar nature, it is said. There is wasting of triceps, biceps, supinator longus, latissimus dorsi, and lower part of trapezius and the serratus magnus. The deltoids and forearm and scapular muscles are of normal size. There is some wasting of the face, especially on the left side. The thigh muscles are atrophied, but not those of the leg. Sensation is perfect, and patellar reflexes normal. Dr. Verco pointed out the differences between the very uncommon form of myopathic atrophy and pseudo-hypertrophic paralysis, and the common progressive muscular atrophy.

Dr. LENDON showed a girl, aged 2½ years, with paralysis of the lower limbs, in whom the act of swallowing was associated with regular movements of the upper limbs, the hands being lifted above the head. The child's head was enlarged, and curiously tympanitic on percussion over the vault.

Dr. T. K. HAMILTON exhibited an infant, 3½ months old, suffering from infantile respiratory spasm. This affection has lately been described as a special neurosis of the larynx, allied to laryngismus stridulus, but differing from it in its clinical features. The distinctive and characteristic symptom of such cases is the more or less continuous croaking sound which the child makes. This child commenced to croak when it was three weeks old, and has continued to do so with slight intermissions ever since. On examination, there is considerable indrawing of the chest-wall and episternal notch on inspiration, but there is a marked absence of

cyanosis and even of distress, while the *alae nasi* move little, if at all. The stridor goes on during sucking, and when the tongue is depressed. The child's cry is quite clear. Like laryngismus the spasm in these cases is said to depend upon cortical irritation. The prognosis is favourable, as the affection seems to pass off gradually, nor does it seem to interfere with the development or even the comfort of the child while it lasts.

Dr. T. K. HAMILTON exhibited an osteoma of the conjunctiva. When performing the operation of enucleation of the eyeball in a middle-aged man, a small osseous development, about 8 mm. in diameter and 1.5 mm. thick, slightly cup-shaped, was found lying underneath the conjunctiva just above the insertion of the external rectus muscle. It is covered with periosteum, and composed of dense bony tissue all through. Osseous formation in the conjunctiva is quite a clinical rarity.

Dr. GILES showed three cases upon whom he had done operation for radical cure of hernia, and also a man, *æt.* 61, who had recovered from double primary amputation of both legs.

The PRESIDENT exhibited several interesting and instructive specimens.

Minutes of last meeting were taken as read, on the motion of Dr. LENDON, seconded by Dr. LERMITTE.

Ballot was taken for Arthur Murray Oudmore, George Alfred Fischer, Arthur Goode, Frank Sandilands Hone, M.B., Ch. B., Adelaide. They were duly elected.

Dr. TRICHELMANN read his

NOTES OF A CASE OF DEATH FOLLOWING THE ADMINISTRATION OF CHLOROFORM.

By E. TRICHELMANN, F.R.C.S., ENG., PORT ADELAIDE.

DEATH in connection with an anæsthetic is fortunately a rare occurrence; all the more it behoves us to make full use of such an incident to throw increased light on the question of anæsthetics generally. As the reading of these notes is to be followed by a discussion, I shall make them as brief as possible. On January 4th last, at 4.30 p.m., I administered chloroform on a double fold of lint to a lad aged 14, who was submitting himself to a small operation on the eyelids.

The lad had taken anæsthetics several times before, both chloroform and ether, according to the statements of his father who was present. The lad's pulse was regular and firm, the apex beat was normal in position and force, so that, although I had a stethoscope in my hand, I did not deem it necessary to use it.

On inquiry as to whether he had partaken of any dinner, his father replied that he had taken nothing since breakfast, except two apricots at 10.30 a.m.

The anæsthesia proceeded quietly, without any struggling on the part of the patient. Before he

was quite under its influence he made a slight attempt to vomit; this soon passed off. The operation was proceeded with, and when one side was complete he showed signs of revival. Some more chloroform was administered, and then the other side was operated upon.

All this time frequent attention to his pulse showed it to be quite regular and strong; his breathing was also perfectly natural. At this stage the operation was almost completed, and no more anæsthetic was administered. During the insertion of the last two stitches in the outer canthus of the eye, he showed signs of recovery, twitched on that side of his face, and presently began to vomit. His vomit consisted of a goodly number of partially masticated, undigested apricots; some of these still retained their shape of a split apricot. During the act of vomiting the last stitch was tied. On wiping the vomited matter from his face, I noticed that he was becoming pallid, and at this stage his pulse began to fail, and ceased to be felt at the wrist three to four minutes after the cessation of administration of the anæsthetic. His breathing still continued normal; indeed, he made normal efforts to breathe for some minutes after restorative measures were commenced, and after complete cessation of the heart's beat, as far as the pulse informed us, so that hopes were entertained that we might be able to recover him. The usual means of recovery were persisted in for one and a quarter hours, but fruitlessly. Air passed freely in and out of the chest. The administration of the anæsthetic lasted less than fifteen minutes, about three drachms being used altogether.

At the *post-mortem* examination held fourteen hours after death all the organs were found healthy, with the exception of some evidence of old pleurisy (adhesions) on the left side, some enlargement of the spleen (11 oz.), and anæmia of the brain. The heart was moderately empty, the muscle tissue and valves being quite normal. The points I should like to call attention to in this case are the following:—

(1.) As long as anæsthesia was complete, the pulse remained regular, firm and full.

(2.) It continued good after partial recovery, and until after the act of vomiting.

(3.) The pulse then failed rather suddenly, while breathing continued normal, or even slightly exaggerated for some time, and then became gasping as cyanosis advanced.

The mechanism of death in this case I describe as syncope from reflex inhibition of the heart, the vomiting being the immediate cause, and this chloroform the remote cause.

One may be without the above ideas and

demonstrating that knowledge, both ideas and knowledge are useless to the individual and the public so far as their free dissemination is concerned. The means for such free dissemination becomes then an important factor, and as in our profession we cannot, without laying ourselves open to the charge of unduly advertising, publish in the lay press matters of a professional nature, we are restricted in this respect to such medical journals as may be within our reach. It is of importance, therefore, that those journals should be ably conducted, and be made the vehicle of disseminating, as far as possible, the knowledge and experience which the members of the profession may acquire, so that all may become partakers of that which is known to each one individually. This free dissemination of knowledge and individual experience requires for its accomplishment a medical journal devoted solely to professional subjects, including preventive medicine, and all matters relating to public health. As the lay press should express and guide public opinion on all questions of a public nature, so should a medical journal aim at expressing and guiding public thought on all subjects pertaining to hygiene, and the relations of the profession to the State. These relations are by no means so well understood in the Australasian colonies as they should be, and the fact that each medical practitioner is to a certain extent a public functionary, as well as a private individual, is too frequently lost sight of. In the former capacity he may be called upon to advise in matters relating to public health, to give evidence of a technical nature in courts of law, and to conduct such examinations as may lead to the arrest or freedom of suspected individuals. And the State requires, and justly so, proof of competency before legally qualifying anyone to engage in the practice of medicine, but where the State fails in its duty to itself is in not preventing unqualified individuals from engaging in a certain class of medical practice. In this country there is absolutely no protection offered to the public against unqualified practitioners, and this arises as much from the want of proper administration of existing laws as from the defects of such laws. So in matters of public health the policy of thrift appears to be the only one which finds favour, especially in this colony, and the subject is played with according to the whim or fancy for the time being of the Colonial Secretary, who, however qualified he may be for the discharge of the other duties of his office, is generally unacquainted with the first principles of sanitary science. However, by virtue of his office, he is supposed to know all about sanitation, so assumes a full and intimate knowledge of subjects which have not been definitely decided by the ablest sanitarians of the day. It is in this direction that so much good has been done in Great Britain by the B.M.A. through its journal, and I hope that the movements which have been brought about, whereby the Branches of the Association in these colonies of Australasia will henceforth have a duly accredited journal of their own, will result in making known the opinions of the medical profession respecting this important matter. The State requires educating up to its duties regarding the great subject of medicine, preventive as well as curative, and this can only be done by the profession itself acting through the means of journals of a professional nature. Unfortunately for the education of the State in this respect, few, if any, medical men form part of our legislatures. If the medical profession were but half as well represented in our legislative assemblies as the legal, we would have less legislation in the direction of promoting litigation, and more in the direction of promoting the health of the community.

And however powerful may be the voice of a medical journal in educating the people, it will be productive of little result compared with that which would follow, if backed up by the voices of some active members of the medical profession in the Assembly. I do not object to lawyers being members of Parliament; on the contrary, I think that they are very useful, and afford much valuable technical information from time to time; but one may get too much even of them, and the absence of medical men from the Assembly is a serious defect in that body, by reason of the want of such technical information as is frequently required by its members. If the members of the medical profession in this colony would but sink all personal differences, and join earnestly in securing the return of two or more of their members to the Legislative Assembly, we would soon see the dawn of better things in legislation for promoting the physical welfare and comfort of the community, and a wholesome check placed on the tendency to encumber our Statute Book with useless sanitary laws. This may seem rather far-fetched and even preposterous to some, but we know that "a little leaven leaveneth the whole lump," and the presence of two or more professionally trained men in the Assembly would modify very materially the trend of thought in matters medical which might come before it. Possibly under such circumstances we might in the near future see the hitherto (with but one solitary exception) unknown occurrence of a medical man forming one of the Ministry of the day. For many years past it appears to have been accepted as an axiom that each successive Ministry should include at least three, if not more members of the legal profession, the present Ministry including four. The political strength of that profession is, therefore, enormous, and it is consequently one of the closest and best disciplined corporations existing. The political strength of the medical profession is only measurable by its abject weakness; it has no cohesiveness, but exists as a number of individual entities, among which the force of repulsion is stronger than the force of cohesion. The medical practitioner, engrossed in his daily work, is too apt to become concentrated in self, and overlook or disregard matters of public importance, which, by affecting the profession at large, cannot fail to affect him individually sooner or later. One object of a medical journal would be to take cognisance of such matters, to be constantly on guard to detect anything which may act injuriously on the profession as a body, and sound the warning note. It is only by guarding the interests of the profession as a whole that we can hope to guard our individual interests; and that man is false to his own ultimate interests who, for a temporary advantage, would occupy a position vacated by another who considered that he had been unjustly dealt with. A prominent statesman said in my hearing not long since, in answer to his Under-Secretary, who informed him that a certain medical practitioner objected to perform some service or other: "Well, get some other doctor to do it. Whenever a doctor will not do anything I want I always get some other one to do it." And, unfortunately, this is only too true; there is never any difficulty in getting a medical man to step into another's shoes, no matter under what circumstances they were cast off. Hence, the estimate formed by statesmen and others of the profession as a whole. But this is not true of all of us. I have known, and that not so long ago, of medical men declining to apply for positions vacated by others who thought that they were wrongly used. This was an act of self-denial on their part, as in all probability they would have been appointed to the

vacant positions had they applied for them. But they preferred the honor of the profession to their own advantage; and rest assured, men imbued with such feelings will eventually gain their reward, which will be of a lasting, substantial nature. The journal which has just been purchased by the New South Wales Branch of the B. M. A., and which is to be made the journal of all the Branches in Australasia, will be of great benefit to this Branch. I only regret that our pecuniary position does not entitle us to take a part in the venture, but I feel assured that each one of our members will realise the benefits which we derive in having an official organ through which we may make known the wants of our community, and impress upon the powers that shape our destiny the necessity of meeting those wants. This journal will establish a bond of union between the different Branches, and will serve to promote a closer communion between the individual members. It may be regarded as a first real step towards forming that federal union of the colonies which so many ardently desire, and which, I believe, can be more satisfactorily and lastingly carried out in this way, by the union of kindred societies and interests, than by politicians meeting from time to time for academic discussions and heavy dinners at the expense of the different communities. The men who take part in these meetings soon pass out of public view, but the societies, cemented and welded together by kindred pursuits and similar interests, will last and grow stronger year by year in the bonds of friendship and brotherly love. So may we eventually see a grand nation formed by such small beginnings, as the noble river is formed by the rivulets and streams comprising its source. Then we may expect to have some approach to uniformity in sanitary legislation, and the community will no doubt be spared the odium of again hurrying an infected ship along the coast to its destination in a southern colony, instead of acting according to the dictates of humanity, and removing from that ship and properly isolating those of the passengers and crew who may be stricken with disease. The system by which we are at present governed is anomalous and unsatisfactory, for while one person is supposed to be charged with the duty of keeping disease out of the colony, another is charged with the duty of dealing with it when it has gained a footing among the community. The Chief Secretary has charge of all quarantine arrangements, and the Colonial Secretary has charge of all arrangements for preventing the spread of disease when it has gained a footing. A body termed the Central Board of Health, composed in part of medical practitioners, and in part of business men, is supposed to exist for the purpose of advising the Chief Secretary and the Colonial Secretary when they require any advice, but as a matter of fact such advice is usually sought, if applied for at all, as a confirmation of the course which has already been adopted, rather than as a recommendation to be acted upon. This body possesses no executive powers, its function being merely advisory, or rather commendatory as above stated, its practical use being limited to acting as a buffer between the Colonial Secretary or Chief Secretary and the general public. The Health Act was conceived during a time of panic caused by a serious and wide-spread epidemic of typhoid fever in 1884, and was modelled on the Public Health Act of 1875 of Great Britain. Anyone reading our Health Act will clearly see that it was passed by those who had very hazy notions of the requirements of the case. In neither Legislative Council nor Assembly was there at the time of the passing of this Act a single member of the medical profession, and so far as I can learn, the

Draft Bill was never submitted to any medical man for consideration. It was, in point of fact, a re-hash of the Act of Great Britain, retaining all its faults and none of its virtues. The present Act is a sort of compromise which may to the uninitiated appear to be capable of performing good work, but is practically a dead letter, as its operations are completely in the hands of the Ministers of the Crown, who can shift their responsibilities when it pleases them to do so, on to the Central Board of Health. It would be amusing, if it were not humiliating, to read year after year the remarks of the members of the Legislative Assembly concerning this Board, when the estimates are before the House in Committee. No one ever appears to know what the functions of the Board are, but all think that it is charged with the performance of certain duties relating in some undefined manner to the health of the community, and according to the notion of each individual as to those duties, he either condemns or faintly praises the Board. The Colonial Secretary invariably promises that he will see that the Board does its duty, and the vote is allowed to pass. Surely, it is time this farce of playing at sanitation were ended, and something more in keeping with modern practice adopted. If the country must have a Central Board of Health, why should not the Board be made worthy of the name it bears? Why should not that Board be composed of medical men known to possess some practical knowledge of sanitary science, of men possessed of a knowledge of the diseases of stock and plants, and of men with some knowledge of sanitary engineering? Such men are to be found in the community, and a Board composed in the manner indicated, if at liberty to meet as often as they thought necessary, and not at the will and pleasure of the Colonial Secretary as at present, and if endowed with proper executive powers and an efficient staff of inspectors, would be of real service to the community, and would command the respect of every member of it. But such a Board would not suit the ideas of certain politicians, who evidently prefer to retain the substance of authority, and delegate to those who are willing to accept it, the shadow. A Board constituted as I have named would have the supervision of the water supply and drainage of every community in the colony, would regulate the treatment of stock affected with disease, investigate the diseases in plants, and carry on bacteriological investigations, and maintain a supply of vaccine virus, and the various antitoxines now coming into general use in the prevention and treatment of diseases in man and animals. There would then be one Department of Public Health managed by a Board with a responsible Minister of the Crown at its head—such as the Local Government Board of Great Britain—instead of as at present a number of isolated Boards depending on an untrained, irresponsible Minister. There is a great and noble work to be done in this respect, and this Branch may, with all earnestness, undertake the accomplishment of it. If, through the efforts of this Branch, more suitable legislation and better administration of sanitary laws can be brought about, it will have accomplished a work that will continue to posterity as a monument of its usefulness. I hope that in the near future a committee may be formed to deal with this matter and make such recommendations as will induce the members of the Branch to unite in demanding efficient sanitary legislation. I have chosen this subject for my address to-night because I consider it one of the most important and most serious which can affect the community among whom we live. If we look around us our total unpreparedness to cope successfully with any epidemic which may

arise in our midst, or gain access to our shores, is only too apparent. We are living in a fool's paradise, and will inevitably be called upon to pay the penalty of negligence sooner or later. Nature has blessed us with a climate which acts the part of scavenger in an eminent degree. The copious rainfall on the coast sweeps away the germs of disease from the vicinity of our dwellings, and supplies us with pure water. But what care is taken to preserve the purity of such water? Absolutely none. Those who have to depend on tap water for their domestic supply, have to be satisfied with the stuff that is often made to do duty for water. No attempt is made to purify the water collected in our reservoirs, or from the gathering ground of the Upper Brisbane River, and at times it is, as you are all too well aware, unfit for use, or as a lay member of the Central Board of Health stated recently, "it is filthy and unfit to bathe in." Still this water finds favour in the eyes of the medical members of the Board. No attempt is made in the great majority of cases to prevent the first washings from the roofs of houses gaining access to the tanks, although efficient and inexpensive means can be applied to such a purpose. Carelessness or ignorance appears to be the rule in these cases. But the people are not solely to blame. They have never been taught the value of adopting proper means to prevent their water supply from being contaminated, and there has been no one to teach them. A properly-constituted sanitary authority would make the water supply to the community its first care, and not only instruct the people in the way of dealing with it so as to reduce the risk of its contamination to a minimum, but enforce suitable regulations to attain that object. Of what use are the unverified opinions of the medical members of the present Central Board of Health as to the respective freedom from pathogenic germs of tap and tank water, unless they not only show how to prevent the access of these germs, but are in a position to insist on the proper means being adopted to do so? Surely this playing at sanitation should cease, and the subject be treated seriously as one affecting the health and lives of the community. Let us hope, therefore, that it will receive the attention that it deserves, and that at our next annual meeting we may have the gratification of knowing that we have contributed to bring about the commencement of a more satisfactory condition of affairs.

Dr. JACKSON proposed a vote of thanks to Dr. Taylor for his able and valuable address, and congratulated him on the ability with which he had conducted the affairs of the society.

Dr. LYONS seconded, and said the progress of our society bears testimony to the able way the President had directed affairs. The address was so excellent and practical that he hoped it would be published in the local press. He had also to thank Dr. Taylor for the kindness and hospitality which the President had extended to members of the Council.

Hon. W. F. TAYLOR replied, and congratulated the society on being firmly established.

Dr. HIRSCHFELD exhibited a small bottle of diphtheria anti-toxin, which he had just received from Germany.

Dr. HIRSCHFELD then continued the discussion on difficulties met with in labour, by reading notes on the third stage of labour.

An interesting discussion ensued, in which Hon. W. F. Taylor, Dr. McNeely, Lyons, McNamara and Connolly joined.

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL SOCIETY OF QUEENSLAND.

THE eighth annual meeting was held on January 8th, at 8.30 p.m., in the society's room, Brisbane. Present: Drs. Bancroft (in the chair), Gibson, Freshney, Lawes, Cooper, MacNamara, Hardie, Little, Wheeler, Hill, Ure, Culpin, Byrne, Thomson, and Love (Hon. Sec.)

Visitors: Dr. A-hworth (Children's Hospital), and Dr. Ahearne (Townsville).

The minutes of last meeting were read and confirmed. The Report of Council for past year was then read by the Hon. Sec. and adopted. The Report is as follows:—

REPORT OF COUNCIL.

Mr. President and Gentlemen,—To-night your Council for the past year has the pleasurable duty to perform of laying before you the eighth annual report of the society, and of giving an account of our stewardship, and it is with much pleasure that we are in a position to repeat the congratulations of our predecessors on the welfare of the society.

The attendance of members has been good, and the contributions of papers and exhibits of clinical material have been well maintained, and to those members who have assisted by their contributions and their presence the Council desire to express their thanks.

At the close of last year we had fifty-three names on the roll, inclusive of four honorary members. Five new members have been elected during the year, viz.: Drs. Thorp, Penny, Weekes, Freshney and Fullerton. On the other hand, there have been two resignations, viz.: Drs. T. I. Bancroft and Weekes. The names of Drs. J. Bancroft, Mullen and McNeely were placed on the honorary list in April. We have unfortunately to deplore the loss by death of Drs. Bancroft, Ellison, Prentice and Cannan. The sudden and lamented death of Dr. Bancroft, the first President of the society, in June, was felt not less as a personal bereavement by most of our members individually than as an irreparable loss to the society and the profession at large. Dr. Cannan, too, was one of the oldest members of the profession in Brisbane, and he has gone to his rest full of years and honours. Our roll now shows fifty-four members, inclusive of five honorary members. During the year twelve general meetings, and twelve Council meetings have been held.

Papers have been read on the following subjects:—

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| 1. Retiring President's Valedictory Address | ... | Dr. Hardie |
| 2. Extra-uterine Gestation | ... | Dr. Love for Dr. Owens |
| 3. Fatal case of Purpura | ... | Dr. Lawes |
| 4. Case of Tetanus | ... | Dr. Hoggan |
| 5. Tetanus following Abortion | ... | Dr. Byrne |
| 6. Tetanus treated by Pilocarpine | ... | Dr. Gibson |
| 7. Lunacy Certification | ... | Dr. Scholes |
| 8. Radical cure of Hydatid | ... | Dr. Thomson |
| 9. Tests for decomposition impurities in Chloroform | ... | Dr. Love |
| 10. Operation for Trichiasis | ... | Dr. R. Thompson |
| 11. Case of Congenital Heart Malformation | ... | Dr. Lawes |
| 12. Difficulties in removing the tube after intubation for Diphtheria | ... | [for Dr. Turner
Dr. P. Bancroft] |

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| 13. Case of Absorption of Uterine fibroid after Laparotomy ... | Dr. Garde |
| 14. Puerperal Eclampsia, with special reference to Urea Excretion | Dr. Love |
| 15. Pharmacopœial Sub-Committee's Report | — |
| 16. Anchylostomiasis | Dr. Bancroft |
| 17. Two cases of Idiopathic Pyæmia | Dr. Bancroft |
| 18. Case of Desquamatic Enteritis | Dr. Penny |
| 19. Case of Apoplexy in a Boy | Dr. Ashworth |
| 20. Cases of Puerperal Eclampsia... .. | Dr. Robertson |
| 21. Foreign Body in Trachea | Dr. Gibson |
| 22. Foreign Body in Trachea | Dr. Bancroft |
| 23. Case of Ruptured Extra-uterine Gestation | Dr. Wheeler |
| 24. Pelvic Abscess treated by Vaginal Incision | Dr. Love |
| 25. Case of Hydronephrosis | Dr. Cooper |

Many of the above papers have been illustrated by exhibits, chief among which may be noted Dr. Love's specimens of extra-uterine gestation, hydatid mole, and sections of seven weeks' fœtus; Dr. Lawes, heart showing purpuric hæmorrhage and congenital malformation, demonstration of tests for detection of decomposition impurities in chloroform; Dr. Penny's fibrinous intestinal cast; Dr. Thomson's hydatid cyst wall; Dr. Gibson's Hypertrophied lobe of Thyroid and corns from Trachea; Dr. R. Thompson's cases of Trichiasis; Dr. Bancroft's Anchylostoma specimens and necrosed bone from case of idiopathic pyæmia, and corn from Trachea. The Pathological sub-committee had through the year prepared and reported upon pathological specimens submitted to them for examination.

The comfort and convenience of having rooms of our own have been much enjoyed during the year, while the advantages have been increased by the addition of a telephone in March last. A brass plate has been affixed to the George-street gate for the direction of strangers. More space is much needed in the Reading Room, owing to the expansion of our library and that of the Royal Geographical Society which shares the room with us.

The *personnel* of the Council has changed but little during the year. In March Dr. Turner left for England, and his place as curator of the library and museum was filled by Dr. Love.

The lamented death of Dr. Bancroft leaves a vacancy in our trio of trustees which you will be asked to fill tonight. Dr. Bancroft's place as Vice-President of the Section of Hygiene and Public Health at the forthcoming meeting of the Australian Association for the Advancement of Science was filled by the appointment of Dr. Little.

In February last a request was received from the General Medical Council in London, through the Medical Board, that the society should co-operate in compilation of future editions of the *British Pharmacopœia*. Drs. Bancroft, Lawes, and Love were appointed a sub-committee to draw up a report, which was duly completed and forwarded in September, accompanied by eighteen specimens of native drugs described and recommended for consideration.

The question of the purchase of the *Australasian Medical Gazette* by the New South Wales Branch of the British Medical Association was brought before the society in a letter from Dr. Huxtable. Further information was requested and supplied in November, members expressing their conviction that under the proposed new regime the societies which did not belong to the British Medical Association would receive fair treatment.

In December a deputation was appointed to wait on the Colonial Secretary with a request that he would cable for some diphtheritic antitoxin for use here. Mr. Tozer willingly acceded to the request, and generously refused to allow the society to defray the necessary expense.

The Treasurer's statement and Librarian's report will speak for themselves.

The thanks of the society are due to the President, Dr. Peter Bancroft, for his energy on behalf of the society and his hospitality to the Council at their meetings.

In conclusion, your Council wishes the society God-speed, and trusts that the coming year may be productive of much good work.

LIBRARIAN'S REPORT.

The hon. librarian (Dr. Ure) presented his report, which ran as follows:—Mr. President and Gentlemen, with regard to the library, I have to report that during the past 12 months the increase in the number of books has been fairly steady and continuous, and the periodicals have, I think, with one exception, been regularly received.

The numbers of the *British Medical Journal*, kindly given by Dr. Turner, however, ceased in, I think, June last. Since that time Dr. Hardie, to whom our thanks are due, has regularly forwarded his copy, and so no break has occurred, nor has any inconvenience been felt.

The past year's numbers of the *Edinburgh Medical Journal* have not been obtained, as was proposed, but as the journal for the seven previous years are now on the shelves of the library—a donation from our honorary secretary, Dr. Love—I would suggest that the back numbers for 1894 should now be obtained, and that the society should continue the journal, as well as the *American Journal of Obstetrics and Gynecology*.

The library has been enlarged by the volumes of the *Lancet* and *The Practitioner*, which for many years past were in the care of the Medical Board. These have now been formally transferred to our care for the use of members of our society, with the condition that they are also available for reference to all members of the medical profession in Queensland. They are all well bound, and in their handsome bookcase are an ornament to our library. Our thanks are certainly due to the Medical Board for this concession, and the more so as such graceful courtesies surely tend to bind the individual members of our profession more closely together.

To Mr. Bruck our thanks are again due for a further gift of books, some of which are of great interest.

Dr. Love also in March last presented us with two years' numbers of the *London Medical Record*.

In addition, we are indebted to Dr. T. Bancroft and to Dr. Thomson for beautifully-executed "Photographs of Lepers." To the list of periodicals must be added the *Intercolonial Quarterly Journal of Medicine and Surgery*, published in Melbourne, and also selected monographs of skin diseases (Sydenham Society).

DR. CULPIN (one of the auditors) moved the postponement of the Treasurer's statement till next meeting. — Carried.

DR. LITTLE drew attention to the need of reminding members in arrears with their subscriptions, and suggested the use of a rubber-stamp, to be imprinted on each monthly circular to remind members.

The ballot for office-bearers for 1895 resulted as follows:—

President, James Hill, M.D.; Vice-Presidents, Wilton Love, M.B. and P. Bancroft M.B.; Secretary, David Hardie, M.D.; Treasurer, John Lockhart Gibson, M.D.; Committee (3), John Ure, M.D.; H. A. Francis, M.B.; C. H. E. Lawes, M.B.; Auditors, Dr. Culpin and Dr. Byrne.

Dr. PETER BANCROFT, the retiring President, then read the following

PRESIDENTIAL ADDRESS.

GENTLEMEN,—My chief remaining duty in the occupancy of this chair to-night is of a two-fold nature. First, I have to thank you for the hearty way in which you have all supported me, with all my shortcomings, during my tenure of this position, distinguished, as you render it, by your support. My thanks are due to members individually—both to those who have prepared papers and subjects for consideration, and those who, by their presence and criticisms, have encouraged and instructed us, and set us thinking and looking upon matters from different points of view.

I desire especially to thank the Council and Hon. Secretary, who have, by their sympathy and assistance, made my burden easier, and my duties a pleasure. I now feel that one cannot fully realise the benefits and pleasures of membership of a society like this until one has had the honor of occupying this chair. I feel, indeed, that the time is only too brief, and now would like, for many reasons, that I were only beginning, instead of ending, my term.

It has been a great pleasure to me to see that the attendance at the meetings has been equal to that of former years.

Perhaps I need not, to you present, insist upon the benefits to be obtained by attending here, which are not those alone of adding to our professional knowledge by the cases we may see and the papers we may hear, comparing and expanding our views, but the spirit of good-fellowship which is engendered the one with the other; the little asperities that are smoothed down, and the lesson we learn, that in spite of our seeming differences, we are all of one type, working for one great end, namely, the alleviation of the suffering, and the promotion of the happiness, of our fellow-creatures, and so we are more inclined to forgive in each other mere variance of opinion.

To make the utmost of our opportunities, we must have the courage of our convictions and practice, and, provided we are sure of our facts, it matters very little if we draw a wrong conclusion therefrom, provided it is expressed here, and we are not wilfully or consciously blind to reason.

Secondly, it appears to be my duty, following the custom of my predecessors, to deliver an address on some subject of general interest to members of the society. Well, gentlemen, in this matter failure is to be recorded against me, for I have, from circumstances which I need not specify, nothing such to offer worthy of the name, this place, or of this audience. I would fain be released from this duty; but this I cannot ask.

What, then, can I profitably speak of without taxing your patience too much?

It occurs to me that there are several questions relating to infancy and childhood which have never been brought up here; perhaps it may serve some purpose if I offer some observations thereon. In adopting this course, I should need make no further apology, I am sure, were I able to lay them before you in a masterly

manner, for there would be no question of its being both of great and general interest. It is not my intention to go systematically into any particular subject, but to touch upon any of which I may have had some experience or made some observation.

If this course does not please you, you may be satisfied if I do not detain you long.

Everyone is aware, I imagine, of the great infantile mortality—how treacherous the rocks and currents without the latitudes of adolescence. Mothers have been made to say that the salvation of the life and health of the young child was a perpetual miracle.

According to the report of the Registrar-General, 42 per cent. of the total deaths in the colony occur in children under five years, while those under fifteen form nearly 50 per cent.

What better plea for the specialist in children's diseases, for the chair of pediatrics, or for the establishment of special hospitals for children? Mr. Coghlan, in his "Wealth and Progress," shews that the colony of Queensland stands in the unenviable position of having the highest mean mortality per cent. of births of any of the Australasian group. What are the factors producing this? I think it lies in our small population, sparsely scattered over a vast territory, embracing the tropical and temperate zones. The mortality rate runs highest in outlying districts, where medical aid and proper foods are difficult to procure. But, considering we have special endemic diseases, which produce much mischief among our young, we do not stand so badly. It has been computed that in the principal cities of Europe, the mean population of still-born children is one in about every twenty births, so that this great infant mortality commences to appear before the separation from the parents; and it is within the scope of a study of diseases of infant life to inquire into the cause and seek the remedy.

There is no information obtainable on this point in our colony. A law to receive the certification of still-born infants would be an advantage. Of this pre-natal mortality, protracted or abnormal labour and syphilis are probably the most potent causes. In connection with the latter, one is struck with the fact that a child may be born, and grow up apparently perfectly healthy, and one or other parent be unquestionably syphilitic of previous standing. I have two cases under my observation at the present time, where the children are aged one year, three years, and six months respectively. They have been perfectly healthy since birth, and the parents—mother in one case, father in the other—are under treatment for gummatous conditions. The converse of the case, that is a syphilitic child, with parents to all appearances well, the disease being quiescent, one can readily understand. Bearing on this, Hensch says, there may be a syphilis tarda appearing for first time between the eighth and fifteenth year, but that he has himself never observed an indubitable case. He further says the alterations in the teeth, which Hutchinson has so strongly emphasised as due to syphilitic alveolar periostitis (incisors short, narrow, notched and widely separate), I should not regard as certain signs of syphilis tarda. As the condition occurs in children who are not syphilitic, but more likely to be rachitic, my experience certainly leads me to the adoption of the rachitic theory for an explanation of many examples of imperfect teeth.

I have somewhat recently observed the case of a girl *æt.* twelve years, with typical teeth, who developed interstitial keratitis, which Dr. Gibson agreed with me was most probably syphilitic. She soon got well under the remedies. The mother at the time was suffering from ulcers of legs which had existed for some years.

She was also subject to frequent and prolonged attacks of jaundice. Our experience with her child led me to prescribe an antisyphilitic course, with the result that she has been well in these particulars ever since, now three years. The mother affirms her child never ailed in any way in infancy. The evidence in this case is too weak to my mind to support the theory of syphilis tarda. Eustace Smith, while inclining somewhat to the belief in a syphilis tarda, expresses the opinion that many of the cases of delayed syphilis are entirely instances of a relapse, the previous symptoms having been misunderstood. It will be interesting to observe these cases during the next few years. We know that a child may be born of a mother suffering from a specific fever or scarlet fever, and not develop the characteristic rash of the diseases, and afterwards appear to be immune.

May this not sometimes be the case in syphilis? A question that naturally arises to us in the management of syphilitic infants is, whether, if the mother be apparently free from disease, she should be allowed to suckle her infant. The answer, I think, should be in the affirmative, for is she not exposed to syphilitic secretions otherwise? To say nothing of the natural mode being of such vital importance to her offspring. It is quite otherwise though with the wet nurse who is healthy—despite the observation of Gunsberg, who has seen thirty-one wet nurses of syphilitic children, and not a single one become infected. He concludes that the congenital disease is never transmitted to the one who suckles.

As to treatment, none seem to me to be comparable to percutaneous administration of mercury, and this method I adopt in the youngest infants, using a diluted ointment. Apropos of this, I should like to mention how speedily and safely the intertriginous redness we see so frequently, whether accompanied or not by excoriation, is dispelled by the inunction of adilute mercurial ointment, although I am not prepared to say which or whether any of them are syphilitic.

I will now pass from inherited trouble to some of those acquired, and firstly I would mention how little the extreme susceptibility of the infant to cold is appreciated. I am convinced that much harm is often done by the attendants, whose zeal is so seldom tempered with thought. The new-born babe which is often in a weak condition, from stress of circumstances in the process of birth, is subjected to a prolonged bathing, and is usually put away with extremities blue and cold. My conviction of the necessity for greater care on this point leads me always to express it when attending on these occasions. I am satisfied at first if the eyes, nose, and mouth are carefully washed.

Young infants often cry a good deal, apparently from cold, in wooden houses in winter. At any rate, I have learned that they are greatly soothed by being laid upon an india-rubber hot-water bag of a suitable temperature.

The earliest and most common ailments of the newly-born are ophthalmia and icterus. The importance of the former condition was recently very strongly shown in a presidential address by Dr. Symons, retiring President of the South Australian Branch of the British Medical Association. Several countries have made it penal for a midwife to neglect to call in medical aid to an infant so suffering within the first two or four weeks of life. Fortunately, when taken early, it is a condition very amenable to treatment.

Icterus neonatorum, which, though in the majority of instances is perhaps hardly to be called a disease at all, is sometimes of sufficiently serious import to cause one anxiety. It occasionally happens that the course is

unusually prolonged, perhaps to three or four weeks, bringing the infant into a greatly emaciated state. A case which recently occurred in my practice seems to me to be worthy of notice here.

An infant, delivered instrumentally with considerable difficulty, very plump and vigorous, *weighing fourteen pounds*, showed signs of jaundice on the fourth day, which developed quickly to great intensity, hue of conjunctivæ being of an olive-green. In spite of taking its nourishment well, it rapidly began to waste, and seemed to be slowly but surely sinking. The urine never stained the napkins, and the motions were constantly brownish. The surface and extremities were cold, and the temperature sometimes observed to be sub-normal, registering 97 degrees in the rectum. It was kept pretty constantly on a hot-water bag, and the mouth frequently watched to prevent aphthæ. At the end of the third week the jaundice commenced to decline, but every particle of fat had disappeared from the body, and the muscles were evidently wasted. It weighed now little more than half its birth-weight. Quite contrary to my expectations, the infant recovered, and seems now healthy and strong. But with anything short of the care it received, I am certain the infant would have died. The clinical symptoms and appearances in this case correspond to those of the ordinary cases, but they were more intense and prolonged. Various theories of its cause are held. The *hepatogenous theory*, as in ordinary obstructive jaundice, is held by some, who find plugs of mucus in the bile ducts, but the colour of fæces show that it is not comparable to obstructive jaundice.

The *hæmatogenous theory* finds many supporters who suppose (from the relationship of blood pigment to that of the bile) the pigment is set free in the blood by the destruction of blood-corpuscles, which the infant possesses in greater comparative numbers than adults, and greater absolute numbers than before birth, from reduction of the circulation by compression of the placental sinuses, forcing the placental blood into the infant's body. There is probably in every case a natural destruction of corpuscles after birth. The comparison of the number of corpuscles in the umbilical vessels at birth and for the first few days of life would be an interesting study. But if, as I have several times done, every available drop of placental blood be crowded into the infant body, the infant is not inconvenienced thereby, and there follows no jaundice if the child be strong, and especially if it had an easy birth. Under these circumstances, there must be a considerable destruction of corpuscles, but it does not suffice to produce any colouring.

Others again hold that the increased supply of albuminous material to the blood from ingestion of milk favours destruction of red corpuscles; but then the more vigorous the child, and the more favoured its circumstances, the greater would be the chances of the incidence of jaundice, unless there were supposed some inadequacy of the liver to the greater demands. Again, Bauer and other writers on dietetics agree that reproduction of essential elements of red corpuscles is favoured by much albumen.

The *reabsorption theory*, supposing a compression of the bile capillaries and interlobular ducts, by an engorgement of the portal vessels simply, or an interstitial œdema, in addition to, and in consequence of this, and the consequent obstruction to the onflow of bile and its reabsorption into the blood, seems to me the most plausible theory, for have not great changes taken place in the hepatic circulation? The sinus venosus in closing, and digestion in process, is determining a great afflux of blood to the portal system.

Careful observers have found yellow bodies in the urine, which they assert to be bile pigment; others equally credible have failed to find either bile acid or pigment in the urine, but have found them in pericardial fluid.

To account for the seeming absence of bile in the urine, is it possible that the kidneys at this time may be unequal to the task of eliminating it? We know that different poisons are eliminated with different degrees of ease under differing circumstances. Dr. Geo. Harley declines to consider this affection as one of jaundice at all, and calls it by the name of chlorosis neonatorum. He accounts for it by the defective oxygenation of the hæmatin from weakness and defective expansion of lungs, &c. It is similar, he says, to the colour of skin in chlorosis of girls, and the conjunctivæ are not yellow; but I have never yet observed a case in which the conjunctivæ were not yellow. Moreover, is he not comparing cause and effect in the two conditions? Defect of blood, causing defective oxygenation in the one case, and defective oxygenation causing defect of blood in the other.

Whatever may be the underlying physiological principle, it is clear that nutrition of body suffers more or less during the progress of the affection.

The condition seems to me to arise more frequently after difficult delivery, especially with injuries to head, and to be favoured by influence of external cold and debility of the infant. The most important point in treatment is to maintain external warmth, which tends to lessen metabolism.

The question that besets us with the greatest anxiety and worry is that of feeding the young when the mother, from some cause or other, is unable to afford the natural sustenance to her infant. Could the cow or some other animal give us a milk which, in its purity without further preparation, could chemically and physiologically accord with that ordained by nature for the nourishment of the young, a great deal of our trouble would be at an end, but unfortunately at the present time there is nothing such to our hand, and we have to make the best of what we have about us. We think of the wetnurse as the next best thing, but the matter is fraught with so many difficulties that it is usually entirely out of the question. It would be a good thing if wetnursing could be put on as satisfactory basis as ordinary sicknursing.

It is interesting to note the practices in other countries who have not our invaluable cow. Take, for instance, China, and there we know the care of the young is not a matter of great importance. The inhabitants have an ox, which is used as a beast of burden, whose milk is used as a beverage after souring, and partaken of in the evenings. Babies which are not suckled by their mothers are wetnursed, and the aged and sick people, too, are fed from the human breast. In Canton there is a foundling hospital with accommodation for 500 infants, and a rule of the institution provides one wetnurse for every two infants. There is an institution in Brisbane for the reception of infants and their unfortunate mothers. Here the total breast supply of mothers is divided with some equality among the different infants. The mother with the bountiful supply has to give certain meals to the infant less favoured, and the motherless one is supplied perchance by one or between two of the women. The plan works very well, trouble chiefly arising when farinaceous foods are introduced later.

In directing the diet of an infant, to understand clearly what is required of us we naturally ask ourselves the question, "What is the character of the food ordained by nature for its nourishment?" We find the

answer, an emulsion of fat with albumen, salts, sugar, and water. We now inquire what are the foods likely to serve in its place. It is clear it should, if possible, be some form of milk, and such we have here in cows' milk, goats' milk, and condensed milk.

Chemical analysis shows that cows' milk contains a good deal more casein than human milk, a little less sugar, and about the same proportion of fat and water. The excess of casein shown in the chemical constitution might not matter much were it not for the physiological fact with which we are all well acquainted, viz., its coagulation by the gastric secretions into large, tough, and dense masses which we often see rejected by the stomach and evacuated by the bowels unchanged. The remaining ingredients—fat, sugar, salts, and water alike in human and cows' milk—are in a condition to be absorbed without any alteration, and their proportions practically agree. The difficulty we have to surmount is how to present the albuminous part in an agreeable form.

Mere Dilution with water, say one to three, does not alter the behaviour of the casein, while it weakens the proportion of fat and sugar, necessitating a much larger amount to be taken; but the latter objection could be easily removed.

Boiling the Milk removes a portion of the soluble albumen; it removes, however, a certain proportion of the cream which rises to the surface entangled in the coagulum, but it produces a considerable change in the casein, for it now coagulates with acids or the lighter curds; but it requires still to be diluted, and unless we add a proportion of cream and sugar the infant will need to take two or three times the quantity to satisfy the needs of the developing body. Some children do well on this, but it is not as safe as dilution with barley or rice-water, which act purely mechanically, separating the particles of casein, rendering it capable of being attacked at more points, and so more quickly dissolved. Barley-water is more commonly used, for the reason probably that barley is much richer in nitrogen and fat, and as this proteid, in the form of gluten, is readily assimilable through gastric digestion, it is an addition to the nutriment, while in the now undigestible ingredient, starch, barley is poorest of the commoner cereals; hence it is perhaps the best attenuant.

Other plans are to alkalise the milk with soda or lime, and so prevent this action of the gastric juice, and permit the milk to leave the stomach in a fluid state, with little or no preparatory digestion.

Though the researches of Sir W. Roberts show that milk is more readily digested by pancreatic extracts than acid pepsin solution, still is it right to repress a normal function like that of the stomach, in order to get an unsuitable food to be tolerated? It may be well to tide over a critical period, but its routine use, seeing it does not aim at the root of the trouble, is hardly necessary or warranted. Fortunately, the average mother adds such an infinitesimal quantity that probably little good or harm results.

The plan of peptonising the milk effectually prevents the formation of curd, inasmuch as the casein is now in the form of soluble peptone, unprecipitable by acids. But this method also can only be used to tide us over a crisis, for by observation nature is found to be true to her laws; where no need arises for the digestive secretions they fall into abeyance and the glands are in danger of atrophy.

Goats' Milk.—We are often asked the question, "What do you think of goats' milk?" Like cows' milk, it contains a greater proportion of solids other than fat, while the casein behaves in exactly similar

manner to rennet or acids. Moreover, goats, as kept here and allowed to wander about, devour whatever kind of green stuff they come across, so that their milk is very apt to contain deleterious matter.

Condensed Milk.—The casein in condensed milk, as in boiled milk, is altered by the process of heating it has been subjected to, and coagulates with acids in a flocculent manner, and should be, therefore, easier of digestion; but the amount of casein in a 1 in 24 dilution is, according to Meig, '865, as compared with 1·046 in human milk, while the fat is in still greater disproportion, as 1·095 to 4·283. The addition of a large quantity of condensed milk would remove this fault, but it would give more sugar than is compatible with perfect digestion. And then, again, more than half of this sugar is cane sugar, added for purposes of preservation, and this material when in excess is liable to excite fermentation and give rise to irritant products of digestion.

Meig says infants fed upon this food are fat, pale, and flabby; have little power to resist disease; cut their teeth late, and are liable to drift into rickets.

Henoch says: "Although I have seen condensed milk used with advantage for some months in a few cases, still I cannot recommend this method of feeding, because the enormous amount of cane sugar necessary for the preservation of the milk frequently produces acid fermentation and diarrhoea."

Louis Starr says: "It is not a safe thing to bring up a child exclusively upon, but it may be used as a convenience."

Eustice Smith and Angel Money agree in this view; but Ashby and Wright doubt the evidence brought against condensed milk. They say they have seen many healthy children brought up upon it from birth. They consider it a good substitute for cows' milk when the latter disagrees.

Cheadle says: "When fresh cows' milk does not agree well, or when it cannot be obtained fresh and good, as on journeys, condensed milk may be used. It is easily digestible; but it is lacking in anti-scorbutic power."

In striking contrast with the moderate terms of these writers are the unmeasured terms of the *Australasian Medical Gazette*, where recently, in a leading article, the opinion of the Melbourne coroner is endorsed from personal observation, viz., that to give an infant condensed milk was equivalent to murdering it.

Probably, no one thinks that condensed milk is equal to good cows' milk, properly prepared and readily digested by an infant. Still, it is a good thing, beyond doubt. I could produce well-developed and healthy children that have been brought up to a certain age on it. Frequently it is the only article at the command of the poor, who cannot afford fresh milk even once a day. Personally, I am in the habit of suggesting it for the first few months of life in the case of people where there is any doubt about their being able to get a regular and good supply of milk, or where the mother is not fully alive to the requirements in the feeding of her infant, particularly with a baby born at the commencement of hot weather, when fresh milk soon gets sour, and gastro-enteritis is rife. When recommending it where cows' milk does not agree, the addition of a little white of egg and cream supply the deficiencies in fat and albumen. Though condensed milk may not be the food of our election, it is, however, with some mothers, and we must be careful in what terms we thrust it aside, for should the food advised be found to fail, the consequence may be rightly laid at our door.

Sometimes, in spite of all we can do, short of peptonising the milk to promote the digestion of the casein, we fail. What then is to be done? We are perhaps afraid to trust condensed milk. We may yet peptonise the milk, but we must remember that we shall have to re-acustom the stomach to digestion.

Cheadle and others strongly recommend the use of bread jelly solution with proportion of cream and raw meat juice. To be successful we must be practical. The bread jelly solution is an excellent thing, but it is far too troublesome for the ordinary mother; it must be made twice a day, and it takes from seven to nine hours to prepare. The raw meat juice is very prone to decompose and lead to putrefactive intestinal changes. The plan I usually adopt is to direct the preparation of barley, or rice water, or a lightly dextrinised food, adding to this albumen of egg as a substitute for the casein, and cream in proportion, according to circumstances, and then subsequently, when it can be tolerated, to commence adding milk. The white of egg should first be cooked after the manner described by Sir W. Roberts, in his Lumleian Lectures, 1890. When studying the digestion of albumens, he found that if white of egg be mixed with ten times its quantity of water it can be boiled on the principle of the water-bath without undergoing coagulation. He found this a very favourable medium for the study of digestion of albumen, the fluidity permitting the ferment to be brought into intimate contact with the particles of albumen. He found that in the raw state the solution is digested with extreme slowness by gastric juice, and pancreatic extract was nearly inert upon it, but after being boiled it is attacked with energy by the gastric ferment, much less energetically by the pancreatic. The experiment is an interesting one, and it is surprising how quickly the process is complete, and the filtrate seems to be pure peptone, giving no precipitate with even nitric acid or metallic salts.

In many cases, where milk disagrees there seems to be a great quantity of acid produced. The researches of Sir W. Roberts show that milk is more readily digested by the pancreatic ferment than by gastric juice. The opposite obtains with white of egg, the digestion of which seems not to be restrained by slight excess of acid, and it is particularly suitable in such conditions.

Out of 1691 deaths in children under one year of age during 1893, 614 or rather more than one-third died from some trouble closely connected with alimentation. The causes are variously specified as English cholera, diarrhoea, want of breast-milk, tabes mesenterica, dentition, dyspepsia, disease of stomach, enteritis, atrophy, inanition. If we deduct those dying from congenital defects, we get nearly half the preventable deaths in children under one year from this cause, which I believe to be some form of gastro-enteritis, from faulty feeding. It is a pity there is not more unanimity in the practice of filling in death certificates.

It might, perhaps, do some good service if the registrar in the case of infants under one year required some information on the question of feeding—whether natural or artificial, and if the latter, what character. There is one point in relation to the more chronic form of gastro-enteritis I would like to allude to. I have made post-mortem examinations of five infants who died from this cause, which some practitioners would record as tabes mesenterica. They all showed, and in some to a very marked degree, atrophy or desquamation of both mucous and muscular coats of intestine. The atrophied portions in some cases were several inches in length, involving the whole circumference with nothing but the peritoneum remaining. The mesenteric glands were

always enlarged, but in no case was there any evidence, microscopic or otherwise, of tubercle. I think the certificate, tabes mesenterica, should never be entered in case of a child, at all events without post-mortem examination. It may be a different thing in adults where there is other evidence of tubercle.

I will turn to the subject of acute pneumonia, a disease which affects children very largely, and exhibits in them certain peculiarities—first, during the course of the affection, and secondly during resolution. Statistical returns of Queensland show, that of all deaths from pneumonia, those in children under five years contribute nearly one-third. The greatest number of deaths appear to be always in the first year, and from then to the fifth year they rapidly decline. Dr. H. Dickenson says more deaths are attributed to pneumonia during the first five years than in any subsequent twenty.

From this it would appear that pneumonia either was especially fatal in early life, or it occurred with especial frequency. Dr. Dickenson gives the comparative mortality of children as 1 in 9; adults, 1 in 5.

Returning to our own colony, the results are less favourable, those of the Hospital for Sick Children giving a mortality of 1 in 5·7 for a period of five years; for a similar period at the General Hospital, 1 in 3·5. These figures show that a greater mortality attends the disease in adults. Therefore, it must occur with greater frequency in children. I think this is one's individual experience, and though the mortality is undoubtedly great in this period, one is in the habit of encouraging the anxious parent with the remark that the powers of endurance of the child against the disease are greater than the adult. Pneumonia may, in some respects, be likened to exanthemata, *e.g.*, measles, first by its greater prevalence during childhood, and secondly by the fact that an individual attack is less dangerous than in adult life.

To allude now to initial symptoms. The rigor which is so common with adults is said to be often replaced by a convulsion in childhood, but in none of my last fifteen cases (the only ones I have kept accurate note of) did it occur once. In twelve, the first symptom was vomiting; in one case, diarrhoea; in five cases nervous symptoms were especially prominent. Four of these were under three years, one a little over three months, the other about five years. The symptoms were similar in all cases, and were, in some degree, suggestive of meningitis. The first physical sign to be detected in adults is usually a fine inspiratory crepitus. In young children, however, the first sign to be recognised is an indefinite and weak respiration, which is peculiarly characteristic, and this weakness seems to characterise the breathing to some extent over portions of the lung which do not subsequently participate in the consolidation. Over this area, the resonance to percussion is high-pitched. These conditions give place to dulness and tubular breathing in from twelve to forty-eight hours. Of these fifteen cases, one died, *viz.*, a baby aged three months, on the third day of the illness. The infant first vomited, then moaned incessantly with closed eyes; head at times rolled from side to side; high temperature, rapid breathing, each respiration being followed by a brief holding of the breath; then a quickened expiration, accompanied by a grunting sound. The breath-sounds were weak and indistinct over the basal portion of right lung. Nothing more decisive in the physical signs followed, but I have no reason to doubt the diagnosis. Lastly, the frequency with which child's pneumonia is followed by empyema is so remarkable that I think one should always warn the parent that

the child is not safe until ten or fourteen days have elapsed from the crisis. Of these fifteen cases, three developed empyema, though this is, I think, quite an unusually large number. Dr. Drummond first took the view that in the majority of instances empyema was the result of pleuro-pneumonia. I have treated in all seventeen empyemas, and in the great majority of instances previous pneumonia existed. One case died—a double empyema, resulting from broncho-pneumonia.

As to treatment, empyema in children is stated by some to be more readily cured by simple aspiration; but I have subjected all my cases to a preliminary aspiration, and have only succeeded in curing one by that means, *viz.*, a baby aged eleven months, with two operations. I think it is not wise to persevere with aspiration, even in the most favourable case, for more than two weeks. The only child I have observed with loss of expansion after empyema is one whom the parents strongly objected to opening the chest, where I aspirated ten times in five weeks, and then had eventually to incise and resect a rib. This child is four years of age, and now, one year since operation, measures one inch less on the affected side. One case I treated by simple incision, within a week of the onset, being unprepared for anything further, owing to failure of aspiration from presence of solid masses. The difficulty of retaining the tube was very great, owing to narrowness of space between ribs, and though it was three months before the wound healed, now, three years since, there is no evident difference between the two sides.

The remainder were all subjected to resection, which, I think, is the preferable operation. I know of no disadvantage in the operation worthy the mention, and it has many advantages. Solid masses of fibrin, which in my experience have been very frequent, are easily removed. There is lessened risk of hæmorrhage; there is little or no increased shock, the operation being performed quite as rapidly as simple incision. There is no increased risk of pyæmia, and I have met with no trouble from necrosis of rib-ends.

A cordial vote of thanks was passed to Dr. Bancroft for his interesting address.

Votes of thanks to the retiring secretary and other officers terminated the meeting.

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

BRISBANE SESSION.

THE Brisbane meeting of the above Association began on Friday, 11th, and formally ended on 18th January.

The section of Sanitary Science and Hygiene—the one with which we are specially concerned—had a number of interesting papers on the list, and finally passed three important resolutions bearing on the subjects under consideration. The attendance at the meeting was, we understand, very good, and altogether the work of the section was a success. The principal officers were, Dr. Springthorpe, Melbourne, President; Drs. Vivian Voss, Little and Salter, Vice-Presidents; and Dr. Hardie, Secretary.

On Monday Dr. Springthorpe delivered the Presidential address. On Tuesday Tuberculosis received special attention, the following papers having been read, as far as time would allow, namely:—

"The Prevalence and Intercommunicability of Human and Animal Tuberculosis," by S. S. Cameron, M.R.C.V.S., Melbourne; "The Contagiousness of

Tuberculosis," by Dr. Vivian Voss; "A Sanatorium for Consumptive Patients in Queensland," by Dr. E. Hirschfeld; "Serum Therapeutics in regard to Tuberculosis," by Dr. Sidney Hunt; and "Notes on Phthisis," by Dr. Lane Mullins.

On Wednesday, Papers were read: By Dr. Wilton Love, on "Compulsory Notification of Infectious Disease"; and by the Secretary—For Dr. K. I. O'Doherty, on "Federal Quarantine"; for Dr. Ashburton-Thompson, on "Remarks on Modern Etiological Views of the Maintenance of Leprosy"; and for Dr. Salter, on "Leprosy: Is Segregation Necessary?"

On Thursday, Papers were read: By Dr. Lilian Cooper on "The Hygiene of Dress"; by Dr. Ahearn, on "The effect of the Queensland Educational Regulations upon the Physique of the Present and Future North Queenslanders"; by Dr. Nolan (for Dr. McDonnell), on "The Sanitation of Country Towns"; and by Mr. Wilson, on "The Distributed Centre System of Mechanical Sewage Transmission."

The work of each day began at 11 a.m., and continued till 1.30 p.m., the last hour being devoted entirely to discussion on the Papers read. The discussion on Tuberculosis was of a specially animated and interesting nature. The following resolutions, bearing on the subjects under discussion, were unanimously passed by the Section at its final meeting, and subsequently approved by the full Council of the Association, viz. :—

RESOLUTION NO. 1.—NOTIFICATION OF INFECTIOUS DISEASE.

That experience having shown that the gains to the public health are enormous where a rational system of compulsory notification of infectious disease has been adopted, this Section considers it imperative that an Act on the lines of the Imperial Infectious Disease (Notification) Act, 1889, should be forthwith introduced in such of the Australian colonies as are still without it, and that copies of this resolution be forwarded to the authorities in such colonies.

RESOLUTION NO. 2.—FEDERAL QUARANTINE.

That this Section is so convinced of the importance to the public health of concerted action with regard to quarantine, that they desire to impress upon the Federal Council the desirability of calling upon the Boards of Health in the various colonies—1st. To formulate a combined course of action to ensure a federal system of quarantine; and (2nd) to arrange a code of sanitary regulations for internal use where the quarantine has proved ineffective in restraining the introduction of infectious disease.

RESOLUTION NO. 3.

That tuberculosis, the principal cause of death in Australasia, is a communicable disease, which, by certain hygienic measures and precautions, is very largely preventable.

That the two chief sources of infection in man are:—(a) the inhalation of the dried sputum of consumptive patients; (b) the injection of infected milk and meat.

As remedial measures, this Section recommends:—

1. That separate hospital accommodation (either as separate wards or special hospitals) be provided for consumptives, and that written instructions be issued to all consumptive persons and their families.
2. That local authorities be compelled to appoint duly qualified officers as inspectors of dairies and dairy stock, of slaughter-yards, and of all animals and flesh intended for consumption as human food.

EASTERN SUBURBS MEDICAL ASSOCIATION, SYDNEY.

A GENERAL meeting of the above association was held at the Paddington Town Hall on December 14. There were present—Drs. Barkas (in the chair), F. H. Quaife, A. F. Parker, G. Lane Mullins, Collins, Walton Smith, Tidswell, Hodgson, W. H. Goode, T. Mailler Kendall, and L. Neill. Messrs T. Magney (Mayor of Woollahra), and J. M. Smail (Engineer to the Water and Sewerage Board) were present as visitors.

After the usual formal business had been disposed of, the President called upon Dr. F. H. Quaife to open a discussion on

THE SANITARY CONDITION OF THE EASTERN SUBURBS OF SYDNEY.

Dr. Quaife said:—The physical features of these suburbs are mainly as follow:—They are built on long ridges comparatively narrow, with spurs running from them, especially towards Sydney Harbour, and towards the sea. At the bases of these are numerous flat valleys only a few feet above the sea. The houses are built mainly on the ridges and slopes, but in a few cases, as at Double Bay, have occupied the sandy flats. The hills are composed of ferruginous sandstone, and are in places covered by shale or ironstone or white clay, but mostly, and especially nearer the ocean, by extensive masses of sand, yellow, compact and firm below, white and loose above, and easily blown about, forming dunes such as exist at Bondi, and used to be seen at the lower end of the barracks, where they are now reduced and built over. The sand is very deep in places, and in others a mere film covering over the rocks. These sandy hills contain large quantities of water, which oozes out into the sandy flats, and used to supply wholesome water, which was the main supply of Sydney, in the Botany dams, for years, till in quantity it became too small, and in quality became polluted by the spread of dwellings and all their drainage upon the water-beds. Even now the water is available in case of accident to the Nepean works, but it is highly desirable that it should only be used for domestic purposes other than drinking or washing food. A notable example of this danger is still seen at the bottom of Newland and Birrell streets, Waverley, where filthy gutters discharge their slops into the Centennial Park above the highest dam. This will soon be corrected by the extension of the sewerage reticulation into the locality. Where the flats are not built upon, it would be, in my opinion, highly beneficial if they could be devoted to forming parks and recreation reserves, as they are in many instances too low for sewerage, except by expensive pumping schemes. The village at Double Bay is now to have such a scheme constructed, and it needs it badly.

The system of sewerage adopted and applied to many parts of the metropolis need not be described; it is well understood by all who have taken any interest in the well-being of Sydney. Suffice it to say that it is designed on the most modern plans, and is being carried out in the most perfect and up-to-date manner as fast as money will allow.

The scope of these remarks embraces the four boroughs of Paddington, Woollahra, Waverley, and Randwick.

Paddington is the most compact and much the longest occupied, and most densely built over. I am informed that in this borough there are now only 43 houses unconnected with the sewers. Of these 23 have

cesspits, 20 earth closets, but all are under orders for immediate connection. Great improvement has taken place in the condition of the street gutters, though here and there some are still allowed to pass slops along. There are about 4,000 houses and 20,000 of population in this borough.

Woollahra is much larger in area than the last, and not nearly so compactly built. The thickest portion is that between its western boundary, Point Piper-road and the Edgecliffe-road—mainly Piper and Edgecliffe Wards. Beyond them population is sparse, except for Darling Point, Double Bay, Point Piper, and Watson's Bay. The denser parts are all now fairly well connected with the sewer; the outlying portions will be dealt with as soon as possible.

Piper and Edgecliffe Wards are nearly all sewered. The latter has 34 earth-closets and 35 cesspits. Double Bay Ward has 141 earth-closets, 127 cesspits; Bellevue Ward has 124 earth-closets and 68 cesspits. The totals are 299 earth-closets and 230 cesspits for about 2,600 houses. So that there is still a good deal to do.

Waverley, which is very extensive, is sewered along the main ridges, but there is a good deal yet to be done and some of its drainage is still in a very imperfect state.

There are 1,343 earth-closets, 199 cesspits, and about 567 houses connected. The slopes toward the sea have yet to be sewered, and as there is now a large population located on those, it is necessary that efforts should be made to overtake this work before the sanitation can be regarded as satisfactory.

Randwick, with a very large area and not so crowded, has 701 earth-closets, 47 cesspits, and 367 houses connected. A local scheme here has been taken over by the Water and Sewerage Board, and this has saved a great deal of time.

All the dairymen and milk vendors in these boroughs are under license and strict supervision, and they are now fairly well managed as regards cleanliness; any infringement of the regulations is quickly reported, and the law is at once brought into play. As a rule, the condition of these cannot be regarded but as satisfactory.

A weak point is the fact that no proper control exists over the numerous stables. We want power to compel these to be paved, and then connected. A great many are, but more are not, and some are very objectionable, and liable at any time to become a nuisance.

There are still in various parts a number of wells, but many of the older ones in the denser parts, and where the water supply is the metropolitan one, have been closed and filled up. A great deal of sickness used to result from the use of the water from some of these in the lower parts, as often cesspits existed near them on a higher level, and with perfectly porous walls. It is desirable that a more strict supervision should be enforced in reference to the condition of the yards and back premises in some parts, especially where poultry are kept. In Woollahra the inspector is instructed to make frequent visitations, and keep a sharp look-out for anything which may be a source of offence.

There has been of late years a decided decrease in zymotic disease in these boroughs, especially where the sewers are in action, and particularly in the case of enteric fever, which is, of course, the typical filth disease in this country. It used to be quite endemic in the denser portions, and most of the cases now occur outside of the sewered limits. It must not be forgotten that the water supply is now much purer, and that we have had several rainy seasons. We want a law to regulate the erection of buildings, and to compel the kerbing

and guttering of streets, now optional. The ventilation of houses and the supply of light should be under regulation, as these have so much to do with maintaining a vigorous state of health. The establishment of sea-baths in various suitable localities has much contributed to the comfort and well-being of the people, and others are contemplated.

The disposal of garbage is still a difficulty, and the question of cremation in regard to it is forcing its way in public opinion, but at present the expense of all the methods induces hesitation among the Councils to commit themselves to the expenditure of large sums of money for the purpose. I hope, however, that ere long some satisfactory plan will be introduced.

The compulsory notification of contagious disease is highly necessary, especially when there is a constantly increasing number of children, large numbers of whom are assembled in the public schools. We cannot hope to put down epidemics of such diseases as scarlatina, measles, whooping cough, diphtheria, &c., without some such provision being compulsory. We are in hopes of soon being able to establish a cottage hospital for accidents and urgent sickness somewhere in a convenient centre.

Allowing for these obvious wants and defects, I think we may congratulate ourselves on the great advance in the healthiness and sanitation of these important metropolitan suburbs.

Dr. COLLINS said he was now attending two cases of typhoid in one of the localities mentioned by Dr. Quaipe as insanitary.

Mr. SMALL said that, owing to want of funds, the Water and Sewerage Board had not been yet able to complete the sewers in Waverley, but it is expected that at the end of 1895 all houses abutting on sewer lines in the eastern suburbs will be connected. He advocated cleanliness of premises and the erection of refuse destructors. Refuse destruction should be co-existent with sanitation and water supply.

Dr. HODGSON said that there were other factors in the prevention of disease besides water and sewerage. The principal of these were air, light, and dryness. Houses should be built so as to admit more air and light, and should be kept dry.

Dr. KENDALL said that of 409 cases of typhoid fever reported to the Water and Sewerage Board, only 22 came from the eastern suburbs, and all of these came from low-lying, badly-drained parts. Typhoid fever has, by the adoption of sanitary measures, been reduced from 100 deaths in the city in 1884 to 15 deaths in 1893. He advocated the appointment of a medical inspector in each district.

Mr. MAGNEY spoke on the disposal of garbage by incineration, and showed that, although the method was almost perfect, yet the great expense in connection therewith was a bar to its adoption at present.

Dr. PARKER spoke of the insanitary condition of some of the backyards in the district.

Dr. MULLINS gave some statistics of the deaths in the eastern suburbs, and spoke of the necessity for the adoption of stringent measures to prevent disease by early and prompt notification of all infectious diseases, by inspection of premises, food and domestic animals, by disinfection of all suspected or infected premises. Medical men should point out to their patients the necessity for keeping themselves, their premises and their children clean.

Dr. GOODE said that seemingly an improved system of sewerage does not prevent the breaking out or spread of diphtheria. He advocated the passing of a Public Health Act.

Dr. QUAIPE replied, and the meeting terminated.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary of their branch in Brisbane.

All communications intended for the Editors may be addressed direct to "The Editors, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors, Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

All business communications and remittances should be addressed to Mr. L. Bruok, Medical Publisher, 13 Castlereagh-st, Sydney. Telephone No. 1770.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, FEBRUARY 15, 1895.

EDITORIAL.

FEDERAL QUARANTINE.

At the present time a craving for Federation permeates the atmosphere of the Australasian colonies. It may prove a very interesting study to investigate the manner in which this great scheme of Federation, so earnestly wished for by all well-wishers to Australian progress, may possibly be brought about—whether it will be attained by a rapid resolution, terminating in a crisis, or become slowly developed by some natural process.

Unhappily for its rapid progress towards completion, it has been played as a political shuttlecock, and pitched hither and thither by political experts, and from time to time, in being tossed up to public notice, has served some subtle purpose in Ministerial expediency or political requirement, either to detract attention from some other issue, or act as a foil against party intrigue. Being thus rudely thrust into political turmoil amongst the contending interests of different colonies makes its position unstable, retards its progress, and renders its future problematical.

But that which Ministerial expediency or political necessity threatens to crush out of existence may yet attain development by a process of natural selection, guided by the laws of evolution. The rudimentary factors of that process exist in the bond of union so rapidly uniting the medical and scientific bodies in all the Australian colonies. As the first link in the chain which forms that bond, we may point to the inaugural meeting of the Intercolonial Medical Congress, held in Adelaide in 1887. Next, the second session, held in Melbourne in 1889, and a further advance—a giant stride—was made at the third meeting, held in Sydney in 1892. The Association for the Advancement of Science holds an annual session, each year in a different colony. At the commencement of the present year the federation of Medical Australasia culminated in the acquisition of the *Australasian Medical Gazette* as the sole mouth-piece and representative of the medical profession in all these colonies.

There is yet another link to be added, and one that will more firmly consolidate this foundation of Federation. That is, the establishment of an effectual form of Federal Quarantine.

Federal Quarantine was first advocated and prominently placed before the medical profession and colonists by the Honourable Dr. Charles K. Mackellar—at the time Health Officer and Medical Adviser to the Government of New South Wales—in an admirable and exhaustive paper read by him before the Medical Section of the Royal Society of New South Wales on 20th July, 1883. In this paper he discussed the question of quarantine under three heads:—1st. The rationality of quarantine, in accordance with the modern teaching of medical science. 2nd. Its applicability to Australia. 3rd. The necessity for the Australian Governments to combine and institute a Federal Quarantine. He most ably discussed and proved the rationality of quarantine and its applicability to the Australian colonies, and brought most cogent arguments to demonstrate the urgent necessity that existed to cause all the Australian colonies to combine towards the establishment of Federal Quarantine.

Quarantine as conducted in New South Wales implies a strict adherence to known sanitary laws, such as the segregation of the sick, the disinfection of persons and things, and the thorough cleansing of vessels.

The objections to quarantine may be summed up in the inconvenience and thralldom to persons, and the temporary damage to commercial interests: for the imposition of quarantine to a ship not only implies a very serious monetary loss to her owners, but also entails the arbitrary detention

of a number of apparently healthy people, simply because they have unfortunately come within the range of virulently infectious disease.

As favouring the policy of quarantine, it is contended that the health and well-being of a community should override the temporary damage to commercial interests and personal inconvenience to which certain individuals may have to be subjected.

For Federal Quarantine it is claimed that, by establishing quarantine stations on the northern and western extremities of our coasts, vessels approaching the colonies with infectious disease on board might promptly land the sick, and then, after purification, proceed to their ultimate destination in quarantine. Thus would personal inconvenience and commercial loss be minimised, as the period of quarantine (generally twenty-one days) would commence from that date.

In Dr. Mackellar's paper, and during the discussion which followed, some remarkable instances were given where calamity swiftly overtook communities in consequence of neglect of quarantine safeguards against infectious diseases:—

It is a historical fact that an American frigate conveyed cholera to Japan, and caused 200,000 deaths from the disease in the city of Yeddo (Tokyo). Some years ago, one of our British ships of war introduced measles into Fiji, with the result that 50,000 or more persons died. In 1873 a well-appointed ship with 500 immigrants arrived at Adelaide with measles on board. At that time there was no quarantine station at Kangaroo Island, or other means of isolation; so, as a matter of expediency, pratique was granted, and the result was that the disease gained a footing at Adelaide, extended overland to important cities in Victoria and New South Wales, reaching Sydney, from whence it was conveyed to New Zealand and Fiji, and finally infected every island in Oceania, and culminated in the death of 100,000 persons.

During September, 1884, the Australasian Sanitary Conference met in Sydney, at which were present delegates from Victoria, Queensland, South Australia, Western Australia, Tasmania and New South Wales. Here the question of Federal Quarantine was discussed, and generally approved; but some difference of opinion as to its feasibility occurred, so only a half-hearted resolution was passed, leaving it optional with the Health Officer at each port of the different colonies to use his discretion in detaining infected vessels, landing the sick and attendants, and in purifying and disinfecting each vessel.

Thus was the subject temporised with, and in 1886 a terribly realistic object-lesson was practi-

cally administered to all the colonies on the subject of Federal Quarantine.

On 15th December, 1886, the North-German Lloyds s.s. "Preussen," 4,000 tons, with a crew of 120, and 544 steerage passengers, arrived at Albany, with a case of small-pox on board. The Hon. H. N. MacLaurin, then President of the Board of Health and Medical Adviser to the Government of New South Wales, made strenuous efforts to induce the Health Officer at Albany to remove the patient from the ship, so as to treat the emergency in accordance with the principle of Federal Quarantine, but without success. The vessel was permitted to proceed upon her voyage, retaining the source of infection on board until he died shortly after his arrival at Adelaide, when he was buried at sea. Passengers were in due course landed in quarantine in Adelaide, Melbourne and Sydney, and, on further cases being developed in different colonies, each case became a fresh nidus of infection to each community where such passengers were landed. Though on the arrival of the vessel in Sydney on 26th December, having apparently no infectious disease on board, yet the next day small-pox began to show itself, and though isolation, daily inspection, and every possible precaution was taken, cases continued to appear almost daily, either amongst the passengers or crew until 7th January, 1887. There occurred in the Sydney Quarantine Station alone seventy-nine cases, of which thirteen died.

In a lengthy report upon the subject, the Hon. Dr. MacLaurin states that, had the requirements of Federal Quarantine been adopted, and the first case of disease been promptly removed to shore, and the vessel properly disinfected, the spread of the disease would have been restricted within very narrow limits.

We trust that the agitation that is now in progress for the establishment of Federal Quarantine will ultimately culminate in the adoption of this very effectual method of preventing the introduction of contagious or infectious disease into these colonies, providing, as it does, that in doing so there is the least possible interference with the liberty of the subject or the hampering of commerce.

NEW SOUTH WALES BRANCH: GAZETTE FUND.

THE following additional contributions to this fund are acknowledged by the Council, with thanks:—

Dr. McMurray, Hyde Park ...	£5	5	0
Dr. Timothy W. Lee, Wollongong ...	2	2	0
Dr. R. Read, Singleton ...	2	1	6
Dr. Peare, Leichhardt ...	3	3	0
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L. R. HUXTABLE, Hon. Secretary.

LETTERS TO THE EDITORS.

HYDATIDS.

(To the Editors of The Australasian Medical Gazette.)

GENTLEMEN,—In answer to Dr. Lendon's letter in last issue of the *Gazette*, I can inform your correspondent that the embryos of *Taenia Echinococcus*, developing as such in the human intestine, never arrive at maturity, but, for some reason as yet obscure, perish at an early stage, and are thrown out, whereas *Cysticercus* is well known to produce the larger *Taenia* found in man. The writer of the leading article on Hydatids, referred to by Dr. Lendon, made entozoa, and more especially *Helminths*, his special study, and as Demonstrator of Anatomy at a European University, repeatedly found very small *Taenia* in the duodenum and ileum, which he identified as *Taenia Echinococcus*.

I am, etc.,

THE WRITER OF ARTICLE ON HYDATIDS.

HYDATIDS.

(To the Editors of The Australasian Medical Gazette.)

SIRS,—In your editorial article on hydatids, in the *Gazette* of Dec. 15th, 1894, you say that "the statement made by Dr. Gardner, of Melbourne, in the *Intercolonial Quarterly Journal of Medicine and Surgery* for August, to the effect that the frequency of hydatids in certain countries, such as Iceland, Mecklenburg, and Silesia, is owing to the poorer classes using the flesh of the domestic dog as food, is devoid of all foundation in fact, for in no civilised country, least of all in Germany, is dog's flesh, or the flesh of any other carnivorous animal, ever eaten." Not satisfied with this highly dogmatic contradiction, you proceed to accuse me of making, and Dr. Grant of "passing over," "a monstrous misstatement," which will have the curious effect of eliciting from the "learned Teutons" at once a "smile of grim irony," and an "indignant demand" for my authority for the statement. As this constitutes a serious charge against our scientific accuracy and our sense of literary responsibility, and as I have very great difficulty in understanding the very dogmatic attitude assumed by you, I respectfully appeal to your editorial sense of justice to permit me to quote one or two authorities on the point. But before doing so, I beg to say, that the parenthetic clause which has provoked your grave censure, viz., "where the poorer classes use the flesh of the domestic dog as food," refers to Silesia alone. The prevalence of hydatids in Iceland and Mecklenburg is otherwise explained, as will presently appear.

The following authorities for the statement as to the consumption of dog's flesh in Silesia may perhaps satisfy you that it was not made rashly.

(1.) In Jaccoud's *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques* (Ed. 1882, Vol. 31, p. 33), Labadie-Lagrave, writing on hydatids of the kidney, mentions the excessive prevalence of hydatids in Iceland and Mecklenburg, and then proceeds to say as to that prevalence:—"Il en serait de même en Silesie au dire de Frerichs et d'Ebstein; et, s'il faut en croire Lebert, la raison en serait dans l'habitude, très-répandue parmi les classes pauvres de ce pays de se nourrir de la viande du chien." (The italics are mine). It is surely impossible to imagine a more positive statement as to the eating of dog's flesh.

The next authority will surely command your respect, being no less a personage than one of the most learned of the "learned Teutons" whose grim irony and indignation you so graphically depict, viz.:

(2.) *Ebstein*, in Ziemssen's *Cyclopædia of the Practice of Medicine*, Vol. XV., p. 744, after explaining the frequency of hydatids in Iceland by the well-known "extremely close intercourse" between the natives and their dogs, says:—"In Mecklenburg the frequency of the echinococci is, according to Wolff, dependent upon the great number of canine *taenia*. With regard to Silesia, in particular, Lebert attributes the frequency of the echinococci, undoubtedly with reason to the consumption of dog's meat by the poorer classes. It is certainly probable enough that during the different manipulations of dog-butcherer the eggs of *taenia* should sometimes escape from the intestine and fasten on the flesh." These quotations would seem to be sufficient warrant for the statement which has provoked your wrath, but I am enabled to add to them the evidence of a witness who may be acquitted of any scientific prejudices, or of the well-known tendency of cyclopædists and other scientific writers to go on repeating a statement simply because it has once been made.

(3.) Dr. Marten, of Adelaide, permits me to quote a letter which he wrote to me immediately after reading your article, and in which he says:—"I asked my coachman (a German), if any people in Germany eat dog. He said, 'Yes, the Gipsies in Germany are always surrounded by dogs, and when short of meat, or on special occasions, they kill their dog as we would a sheep, and have roast dog for dinner.'" This particular Teuton was evidently not learned enough to be grimly ironical or indignant at the imputation.

I trust that you will now acquit me of making, and my "learned co-editor" of "passing over," a "monstrous misstatement," "devoid of all foundation in fact," and may I venture to beg that you will reciprocate my candour, and relieve my mental perplexity, by quoting authorities for certain statements contained in your article, which have impressed me with a painful sense of having fallen hopelessly behind the advance of medical and biological knowledge?

(1.) "In our country districts many dogs are infested with *Taenia*, both *T. Echinococcus* and *T. Mediocanellata*." As I have hitherto been under the impression that human intestine was the sole habitat of the adult *T. Mediocanellata*, I have consulted all the authorities accessible to me, but have failed to find the slightest hint as to the occurrence of that worm in the dog. This is the more perplexing as, in addition to treatises on human entozoa by Cobbold, Küchenmeister, Davaine, and Thomas, I carefully searched the pages of Neumann's and Cobbold's works on the entozoa of the domestic animals. Davaine and Cobbold give exhaustive lists of the internal worms of the dog, including no less than *six* species of *taenia*, but among these the *T. Mediocanellata* is conspicuous by its absence. I should therefore be glad to know your authority for the statement quoted above.

(2.) That when hydatid embryos are taken alive into the alimentary canal of man, "if their envelopes escape the action of the gastric juice, and they leave the stomach intact, they develop in the upper part of the small intestine into *taenia*." In other words, the alternation of generations is dispensed with, and the ovum discharged by the adult *taenia* develops directly into a new adult *taenia* in the animal which ordinarily serves the humbler office of intermediate host. As this, if established, would constitute a new departure in

biology of the highest significance, implying as it does that man may breed the *tænia* without the aid of the dog, and may constantly re-infect himself or his fellow-man, it is to be presumed that you have either the support of a recognized authority on the subject or such original data of your own observation as serve to place its truth beyond doubt. In our comparative ignorance of the subject, we should gratefully welcome a publication by you of such authority or such original data, and a statement of the latter would doubtless excite intense interest if communicated (say) to the Royal Society of England, or some similar scientific body.

(3.) That "the eating of raw or under-done pork, mutton and beef is the most fruitful source of hydatids in man, at least in Iceland and Germany." I am aware that raw or under-done pork may communicate *Tænia Solium* and *Trichina Spiralis*, and that under-done beef may infect its consumer with *T. Mediocanellata*, but I have failed to find any authority for the statement that raw pork, mutton or beef may give hydatids. May I, with all respect, suggest that you have here committed the logical error of *hysteron-proteron*, and that instead of inferring from the above-quoted statement that "the embryos must be present in the flesh of these animals in a loose and undeveloped state," it would have been logically sounder to begin by demonstrating (say microscopically) the truth of the latter statement, and then legitimately inferring from it the infective power of the flesh.

There are other points in your article which have also caused me some perplexity, but if you will be so good as to clear up the foregoing puzzles, you will not only earn my gratitude, but satisfy me that my lack of comprehension is due solely to what you politely describe as my "antipodean ignorance." In conclusion, will you accept my very sincere thanks for the great pleasure and entertainment which I have derived from my perusal of your article, and my thanks (in anticipation) for the instruction which I hope to derive from your reply to my diffident questions.

I am, yours truly,

WM. GARDNER.

Melbourne, 31st January, 1895.

[By way of comment upon the above, it is only necessary to point out that the columns of the *Gazette* are open to all legally qualified members of the profession, and that, therefore, Dr. Gardner's request for information will probably meet with a response from the member of the late editorial staff who is responsible for the statements referred to in this letter.—ED. A.M.G.]

THE STRYCHNINE TREATMENT OF SNAKE-BITE.

(To the Editors of The Australasian Medical Gazette.)

GENTLEMEN,—That the attitude which the *A.M. Gazette* assumed from the first towards Dr. Mueller's treatment of snakebite was based on sound judgment, is now abundantly proven by its results and rapid introduction throughout Australia and the greater part of India. Since, nevertheless, there are cavillers like Dr. Jefferis Turner, whose letter on the subject, dated from Halle, Germany, appeared in the December issue, it may not be out of place to once more recapitulate the reasons that prompted the late editors of the *Gazette*

to accord to Dr. Mueller all the aid and support they could render him.

Of the various theories that have been published from time to time to explain the peculiar action of snake-poison, that presented by Dr. Mueller appeared to be most worthy of serious consideration, because it was based on strictly scientific lines, and fairly accounted for all the symptoms following the introduction of the poison into the human organism. This, accounting for all the phenomena observable in connection with it, is the criterion by which any scientific theory must stand or fall. Finding that Dr. Mueller's theory fulfilled this most indispensable condition, the late editors had no hesitation in endorsing it, even before Feoktistow's experimental researches had conclusively proven it to be correct, and when the practical proofs of its correctness were limited only to a few cases of snakebite successfully treated with strychnine injections. These cases have now been multiplied by hundreds, and the theory of snake-poison as a depressing nerve-poison ranks among the established truths of science—however tardy the recognition of this fact may be on the part of the scientific world. And, as with the theory, so it is with the treatment, since it is the direct outcome of the theory. Before the action of snake-poison had been fully ascertained, it was impossible to determine what the action of the antidote should be. Knowing the former now, and the organs it attacks, we may unhesitatingly place strychnine as *facile princeps* among the physiological antidotes to snake-poison, for we know of no substance—unless, perhaps, the closely-related *brucine*—that forms so complete an antithesis to it in its action. Both theory and treatment, therefore, stand on an impregnable scientific basis, and the *Australasian Medical Gazette* may justly boast of being the only medical periodical that has pointed this out consistently from the first. Outside of the strychnine treatment, all is empiricism in this line of research. As far as chemical antidotes are concerned, it requires a much deeper insight into the mysteries of organic life than we now possess to devise one that will single out the snake-venom, and not only modify it in its chemical constituents, so as to deprive it of its toxic properties, but also neutralise and destroy its action on the nerve centres after they have been completely invaded by it. As this paralyzing action persists, even after the vascular system of a poisoned animal has been thoroughly washed out with defibrinised healthy blood, the latter task appears almost a hopeless one for a chemical antidote to accomplish. It must be patent to any unbiased mind that at the present state of science the problem can only be approached from the physiological side, and this, it may be maintained, has been done successfully by Dr. Mueller in his strychnine treatment.

It remains to be seen whether the immunity-serum will fulfil the expectations formed of it, when applied to the human subject and used on as large a scale as the strychnine is now. The proposed treatment is purely empirical, as no reasons can be assigned for the alleged antidotal powers of the serum, nor any explanation given of its *modus operandi*. To prognosticate its success at the present juncture would be just as irrational and premature as to anticipate its failure. Old Father Time, in due course, will record the verdict, and, I believe, the *A.M. Gazette* will not be the last to congratulate Dr. Calmette on his discovery if it turns out a success.

I am, Gentlemen,

Yours faithfully,
EXPERIENTIA DOCTUS.

REVIEW.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.

Edited by Charles E. Sajous, M.D., and seventy Associate Editors, 1894; five volumes, seventh series. The F. A. Davis Co., Philadelphia, New York, Chicago. London: F. J. Rebman.

VOL. I. deals with the diseases of the lungs and pleura, heart and blood vessels, mouth, stomach, and other abdominal organs. A special article on cholera, by Griffith, is of more than ordinary interest; whilst the article on diseases of the kidneys, bladder and adrenals, diabetes and urinalysis, by Professor Lépine, of Lyons, constitutes a series of monographs on these several subjects.

We do not consider it necessary to praise this splendid work; the superlative has been used so often in connection with reviews of it that it would be absurd to say the same things over again. The present series is quite up to the mark; the number of contributors has increased to over two hundred; the number of journals, monographs, theses, and other medical works reviewed, number 2,176—a truly colossal figure. Notes are not inserted in the text, which renders the reading much easier and more continuous. When an article is quoted the reference is inserted in very small type immediately after the name, thus: "D. B. Hardenbergh, of New York, July 29, reports ten cases of." The number "59" refers to a classified list at the end of each volume in which each journal has a number, the one in question here being the *New York Medical Record*, of July 29th, 1893. The article on "fevers" in this volume is truly splendid; whilst the diseases of the blood and spleen, as well as diphtheria, croup, &c., rheumatism and gout, will prove of inestimable value to the busy practitioner who wants to rapidly inform himself as to the treatment most in, and the latest pathological researches in these important affections. Vol. II. contains several gems; notably a well-written article on diseases of the spinal cord, by Professor Obersteiner, of Vienna; inebriety, morphinism, &c., by Dr. Norman Kerr, of London; diseases of pregnancy, by Lutand, of Paris; obstetrics and puerperal diseases, by Professor Budin and Dr. Merle, of Paris; as well as peripheral nervous diseases, &c., by Dr. Sollier, also of Paris. The inclusion of names like these in the work renders it more of a cosmopolitan character than ever before. The fact that the editor himself has removed to Paris, and does all the work there, almost robs it of its American origin, if that be possible.

The *Universal Medical Journal* is also published monthly, at Paris, by Sajous, and materially aids in editing the work now under review. It used to be known as *The Satellite*, but was soon found to be too small for the objects aimed at. The *Dietetics of Infancy*, by Edwards, brings vol. ii. to a close. Many valuable hints as to artificial feeding will, no doubt, be derived from the careful study of such an up-to-date article as this.

VOL. III.—This is perhaps the most interesting of the whole series, dealing as it does in a most exhaustive manner with the surgery of the brain and spinal cord, the thorax and abdomen, rectum and anus, syphilis, and many other important matters. The two Sayres, of New York, are responsible for the chapter on orthopaedic surgery, which is profusely illustrated; some of the apparatus depicted are marvels of ingenuity for the treatment of deformities of various kinds. The osteoclasis of Grattan and Pelore remind one forcibly of Inquisitorial instruments of torture,

although they may no doubt be very useful in the hands of the inventors. The names of Fitzgerald, Gardner, and McCormick, Australian surgeons, are duly mentioned in connection with several operations they have devised for the cure of deformities.

The Professor of Surgery at the University of Ghent (F. Van Imaschoot) contributes an article on surgical dressing and antiseptics, which, if not a translation, is written in faultless English; and, by the way, we may observe that the whole five volumes of the annual are free from Americanisms, or those crude attempts at spelling reform that disfigure so many recent American works. The article on anaesthetics, by Dudley Buxton, of London, brings a most attractive volume to a close.

VOL. IV.—This volume deals with skin diseases, ophthalmology, nasal, aural and oral surgery, laryngology, thyroid disease, legal medicine, and bacteriology. There is a special article on intubation of the larynx, by the inventor, O'Dwyer, and the article on Medical Demography is from the pen of F. Levison, of Copenhagen. There are numerous coloured illustrations in the text, especially in the section on ophthalmology, which are beautiful specimens of photolithography.

VOL. V. is opened by a 100 pp. article on general therapeutics, by Dujardin-Beaumetz and Dubief, of Paris; and there is an article on gynaecological electrotherapeutics, from the pen of Apostoli himself, in conjunction with Jules Grand, of Paris. Articles on experimental therapeutics, climatology, hygiene, anatomy (by Paul Poirier, of Paris), teratology, physiology, and biology go to make up the balance of this volume, which is indeed a remarkable one. Not the least interesting feature is the article on histology, by the editor himself; and the triple index with therapeutical column is above all praise, dealing, as it does, with the whole five volumes.

The annual is now perfect, and by securing a copy a medical man can save himself trouble and expense—the former by finding in a concrete form all that he wants to know regarding some favourite subject; the latter, by not being obliged to subscribe to an enormous number of foreign periodicals, which are, perhaps, only glanced at once and thrown aside.

Dr. SPRINGTHORPE, referring to his paper on the use of anti-toxin, informs us that the following have also been injected with anti-toxin since the paper was read:—

7. C. H., aged 6, admitted January 31st, 1895. The previous day his sister had died of laryngeal diphtheria (verified *post mortem*). For a week he had suffered from sore throat. The previous night he became suddenly ill. On admission, both tonsils were covered with membrane. Dr. Nelly found diphtheria bacilli. On February 2nd, 8 c.c. were injected. Most of the membrane came rapidly away; there was no further trouble of any kind.

8. W. McG., aged 13, admitted January 30th, 1895, with a scarlatinal rash on his body, and severe angina, also membrane on both tonsils, and uvula. M. de Bavay found both streptococci, and diphtheritic bacilli. There was temp. 103, and resp. 40. On February 2nd, 10 cc. were injected, without any marked effect on temp. or throat. The temp. rose, and still remains above normal during much of the day, and there are signs of a patchy broncho-pneumonia, apparently decreasing in severity.—February 2nd, 1895.

Remarks.—Larger, in Case 7, and probably also in Case 8, repeated injections would have been given had the flask not become exhausted. The two cases support the conclusions already advanced.

STRYCHNINE IN SNAKEBITE.

DR. T. A. Manikam Pillay, in medical charge of the hospital at Ulunderpet, South Arcot, India, reports in the *Indian Medical Record* of December 16, 1894, three cases of snakebite successfully treated with hypodermic injections of strychnine, according to Dr. Mueller's method.

CASE 1.—Kasanen, a Hindoo shepherd boy, aged 10, was bitten by a cobra on his foot, and brought to the hospital at 7 p.m. on the 10th September, 1894, in a state of complete unconsciousness. Between 7 and 8.30 p.m. 50 minims in all of liquor strychnis B.P. were injected hypodermically, viz., 15m. at 7 p.m., 15m. at 7.15, 10m. at 7.40, and 10m. at 8.30 p.m. After this fourth injection he recovered, and the next morning he walked home.

CASE 2.—Thoppalan, a Hindoo coolie boy, aged 12, was bitten by a viper and brought to the hospital on the 19th September, 1894, at 4.30 p.m. in a semi-conscious state; 10m. of liquor strychnis B.P. were at once injected, and at 5 p.m. another 10m. At 8 p.m. he was permitted to go home.

CASE 3.—Natasas Asary, a Hindoo goldsmith, aged 24, was bitten on his foot and brought to the hospital at noon on the 26th September, 1894. On the way the victim was found to be almost dead, and his relatives resolved to return to the village. But the man, at whose instance the patient was carried to the hospital, guaranteeing a cure, the sufferer was at last brought to the hospital. On admission he was perfectly comatose, pulseless, and with the feeblest possible action of the heart; 20m. of liquor strychnis B.P. were injected at once. After a quarter of an hour another 15m., and 20 minutes later another 15m., in all 50m. He was kept in the hospital until the evening, when he felt all right, and was permitted to go home. Dr. Pillay states that during February and March last four other cases were similarly treated in the same hospital with success.

Assistant-Surgeon Baldeo Singh, and Surgeon-Captain G. H. Baker, I.M.S., of Banda, N.W.P., India, report in the *Indian Medical Gazette* for December, 1894 the following case of cobra-bite, successfully treated by hypodermic injection of strychnine. Subhani, a Mahomedan, aged 38, a snake-catcher, was bitten by a cobra on the dorsum of the right foot, on the 29th October, at 11 a.m. When seen in hospital at noon he was drowsy, thick viscid mucus flowed from mouth and nostrils, pupils slightly dilated, voice nasal, loss of power over the extremities, and ptosis of right eye. At 12.25 p.m. 1-15th gr. of strychnine was injected in the right arm, and between 12.50 and 3.50 p.m. eight other injections of 1-30gr. each were administered, again at 4.25 p.m. 1-15gr., and the last injection of 1-30gr. at 5.15 p.m.

M.D. (LOND.), aged 27, with the highest collegiate and general recommendations, and three years' hospital experience in England, principally London, is anxious to hear of a good class practice, or partnership in one of the larger towns of Australasia.

"GALEN," *A. M. Gazette*.

THE YEAR-BOOK OF TREATMENT FOR 1895 will arrive in March. Price 7s. 6d., by post 8s. Orders are now being booked by L. Bruck, Medical Bookseller, Sydney.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during December to every 1,000 of the population was 2.38, and of deaths 1.33. Eighty-eight deaths occurred in public institutions. The deaths of children under five years of age during the month were 802, or 53.74 per cent. of the total, 241 being under the age of 1 year. Three deaths of child-bearing women took place during the month, or 1 death of a woman to every 328 births recorded.

THE Agent-General in London has arranged for a fortnightly supply of twenty-four tubes of Behring's Antitoxin for the treatment of diphtheria; the first lot left London for Sydney by the R.M.S. "Rome," and on arrival it will be distributed amongst members of the profession.

THE following examiners were appointed for the conduct of the forthcoming examinations for the degree of Doctor of Medicine of the Sydney University:—Anatomy: Prof. Stuart, Prof. Wilson, and Prof. Haswell. Medicine: Dr. Cox, Dr. R. Scot Skirving, and Dr. P. Sydney Jones.

THERE were 389 maternity cases admitted during 1894 to the lying-in ward of the Sydney Benevolent Asylum, 80 being married and 309 unmarried. Altogether 404 women had been admitted, of whom 12 had died, 10 of the deaths being due to puerperal fever.

LAST year 481 cases of typhoid were treated in the Sydney hospitals, 60 resulting fatally.

THE salary of the Medical Superintendent of the Sydney Hospital has been increased by £100 per annum.

DR. J. C. COX has been appointed Chairman, and Dr. L. R. Huxtable of Sydney, a member of the Board of Official Visitors to the Hospitals for the Insane at Gladesville and Callan Park, and the Licensed House for the Insane at Cook's River, consequent upon the retirement of Sir Alfred Roberts.

DR. W. ATTERBURY, late of Akaroa (N.Z.), and formerly of Hillgrove, has started practice at Canterbury, near Sydney.

DR. DAGMAR BERNHARD has commenced practice at 219 Macquarie-street, Sydney.

DR. HAROLD BROWNE, of Molong, has been elected President of the local School of Arts.

DR. J. EATON has succeeded to Dr. Struthers' practice at Bylstone.

DR. W. FINLAY, late of Young, has started practice at Glenmore-road, Paddington, Sydney.

DR. J. F. FLASHMAN, late of the P.A. Hospital, Sydney, has started practice in Petersham.

DR. HELSHAM, of Richmond, has been elected President of the local School of Arts.

DR. A. L. KERR, formerly of Molong, has succeeded to Dr. Saunders' practice at Granville.

DR. McDONALD GILL, of Liverpool-street, Sydney, has been elected hon. assistant physician of the Sydney Hospital, in the place of Dr. Rennie resigned.

DR. R. LOUGHER has removed from Randwick (Sydney), to Narramine.

DR. S. H. MCCULLOCH, of Sydney, has removed from Pitt-street to 24 College-street, Hyde Park.

DR. J. B. MCILROY, late of Condobolin, has started practice at Annandale, near Sydney.

DR. A. W. MCMATH, of Dungog, has gone home for six months. During his absence his practice will be carried on by Dr. P. W. Thompson, formerly of Burrows.

DR. W. K. MACROBERTS has removed from Uralla to Walcha.

DR. P. MELLISH has left Wallsend for Queensland.

DR. C. H. MOLLOY, Medical Superintendent of the Melbourne Hospital, while on a visit in Sydney, was run over by a cab on February 2, the wheel passing along his left leg and ankle. He was picked up unconscious, and conveyed to the house of Dr. McAllister, of Stanmore, where he was confined for some days.

DR. O. R. P. MUELLER, a Melbourne graduate, has been appointed resident surgeon at St. Vincent's Hospital, Sydney.

DR. A. PRING, late of Moss Vale, has joined Dr. Woods at Uralla.

DR. JOE RYAN, late of Wollongong, is now practising at Hillston.

DR. J. H. SAUNDERS, late of Granville, has left for the Murchison goldfields, W.A.

DR. M. G. SELLAR, late of Glebe Point, has left for England.

DR. J. SEVIER, late of Newtown (Sydney), left for London by the R.M.S. "Himalaya."

DR. J. C. SIBLY, late health officer at Watson's Bay, has commenced practice at No. 8 Victoria Terrace, Miller-street, North Sydney.

DR. J. B. SOUTHAM has removed from Orange to Brisbane.

DR. JAS. STRUTHERS, of Rylstone, has been appointed medical officer of the hospital at Hill End, in the place of Dr. Wiston Baker.

DR. F. TIDSWELL has been appointed Government bacteriologist.

DR. H. W. S. VERITY, formerly of Cheltenham (Vic.), has returned to the colonies, after several years absence in the old country.

DR. J. A. WEBER, late of Natimuk (Vic.), has succeeded to Dr. Towle's practice at Nymagee.

NEW ZEALAND.

THE proportion of deaths registered during December to every 1,000 of the population was 1.18 for Auckland and suburbs, 0.68 for Wellington with suburbs, 0.60 for Christchurch and suburbs, and 0.74 for Dunedin and suburbs. The total births in these four boroughs during December amounted to 295, against 343 in November. The deaths in December were 135, to which males contributed 64, and females 71. Twenty-nine of the deaths were of children under 5 years of age, being 21.48 per cent. of the whole number; 20 of these were under 1 year of age.

THE Trustees of the Dunedin hospital have elected the following as the staff for the current year:—Senior house surgeon, Dr. Ross; junior, Dr. Gregg; hon. medical staff—Drs. J. Macdonald, H. L. Ferguson, Jeffcoat, Barnett, Cloes, Davies, Colquhoun, Stenhouse, Macpherson, and Roberts.

DR. ISAIAH DE ZOUHE, M.D., Qu. Univ. Irel., 1865, M.R.C.S. Eng. 1864, who for sixteen years practised

in Dunedin, died at Clifton Springs, near New York, on the 4th November, 1894, aged 55 years. Prior to his departure for Australia, in 1876, the deceased gentleman, who was a native of Dublin, held the appointments of Clinical Assistant at Mercer's and Meath Hospitals, Dublin, and also of Senior Resident Medical Officer at the Fever Hospital, Liverpool.

DR. K. W. ALEXANDER, of Dunedin, has returned to the colony from his trip to England.

DR. P. T. BOLGER has returned from his trip to England, and re-purchased his old practice at Akaroa (Canterbury) from Dr. W. Atterbury, who has left for New South Wales.

DR. E. W. CAMPBELL WILKINSON, late of Featherston and Huntville, has commenced practice at Foxton, 103 miles north of Wellington.

DR. J. S. CARO has returned to Napier from his trip to Europe.

DR. W. T. DERMER has removed from Foxton to Wairoa (Hawke's Bay).

DR. G. G. GILLON, of Wellington, returned from England by the R.M.S. "Cusco."

DR. T. G. H. HALL has removed from Kamo to Whangarei.

DR. A. J. NEALE, late of Goulburn (N.S.W.), has succeeded to Dr. Hislop's practice at Palmerston (Prov. Otago).

DR. J. ROSS has removed from Wairoa to Woodville.

DR. A. M. WHITEHEAD, of Petone, has returned from his trip to England, and joined Dr. Collins in Wellington.

DR. THOS. B. WHITTON, of Reefton, has left, via San Francisco, for Ireland, on a six months' holiday. Dr. Edward H. Scott, formerly Acting Resident-Surgeon at the Brisbane Hospital, will carry on Dr. Whitton's practice during his absence.

QUEENSLAND.

AT the meetings of the Australasian Association for the Advancement of Science, held in Brisbane last month, Dr. F. H. V. Voss, of Rockhampton, read a paper on the "Contagiousness of Tuberculosis;" Dr. J. S. Hunt, of Hughenden, contributed a paper on "The Promise of Serum Therapeutics;" Dr. Salter, of Thursday Island, on "The Segregation of Lepers in Australia;" Dr. Wilton Love, of Brisbane, on "The Notification of Infectious Diseases;" and Dr. O'Doherty on "Federal Quarantine."

THE Government have obtained for the Brisbane Hospital a supply of anti-toxin from Dr. Ruffer, of the British Institute of Preventive Medicine, and are prepared to forward it to any urgent case on request. Application should be made to the Colonial Secretary. A further supply has been called for.

DENGUE fever is very prevalent in Townsville.

THE following medical men have been made Justices of the Peace in Queensland, viz.:—Dr. W. O. Faulkner, Rockhampton; M. W. C. Perceval, Isisford; W. E. Roth, Boulia; and D. W. B. Wilkie, Gayndah.

HENRY GIRDLESTONE, M.R.C.S. Eng., 1839, L.S.A., Lond., 1840, who reached the ripe age of 81 years, passed away very quietly on January 22nd, at Sandgate, where he had been practising for the last 10 years. He had been in the colony for over 23 years, and formerly practised at Warwick, and subsequently at Goondiwindi, and at one time at Warialda (N.S.W.).

DR. H. C. BOWSER, of Port Douglas, has been elected Resident Surgeon of the Gladstone Hospital, defeating Dr. Thorp, the present surgeon, by 18 votes. There were four other applicants.

DR. E. M. OWENS, who practised in Brisbane for over 10 years, has left for Castlemaine (Vic.), where he has taken over Dr. Dobbin's practice.

DR. ANDREW STEWART, having been appointed Surgeon of the Walsh District Hospital, has settled at Montalbion.

THE Hon. Dr. W. F. Taylor, of Brisbane, has been elected President of the Royal Society of Queensland.

SOUTH AUSTRALIA.

A HOME for Chest Diseases has recently been erected at Belair, near Adelaide, by the trustees under the will of the late Mrs. Jessie Brown. The institution is to be opened this month.

THE Rev. W. L. Morton has been licensed to keep the house known as Hope Lodge, formerly known as the Belair Inebriate Retreat, as a house for the protection, treatment, and cure of habitual inebriates.

DR. J. OUTHBERT, of Kadina, has left for Western Australia.

DR. E. G. ERSON, late of Border Town, has left for Western Australia.

DR. G. G. NICHOLLS has removed from Gumeracha to Port Germeln.

DR. H. A. POWELL, late of the Adelaide Hospital, has commenced practice at Angaston.

TASMANIA.

THE total number of births recorded in the Hobart district during the year 1894 was 1,034, or 29.18 per 1,000 of the mean population; and in Launceston district 711, or 31.43 per 1,000 of the mean population. The total number of deaths in the Hobart district during the same period was 637, or 17.98 per 1,000 of the mean population, and in the Launceston district 371, or 16.40 per 1,000 of the mean population. In Hobart 149 died under five years of age, and in Launceston 108. In Hobart 55 died from phthisis, and in Launceston 27. Cancer was the cause of 27 deaths in Hobart, and of 19 deaths in Launceston.

AT the meeting of the Federal Council, held in Hobart on February 1st, the following motion with reference to "Federal Quarantine," proposed by Sir John Forrest (Western Australia) and seconded by Mr. Nelson (Queensland), was carried unanimously:—"That the circumstances of the colonies demand the establishment of a system of federal quarantine, and that the Legislatures of the represented colonies be asked to formally refer the subject to the Council." Sir John Forrest suggested the erection of stations at King George's Sound and Thursday Island.

DR. E. W. IRELAND has started practice at 142 Elizabeth-street, Hobart, where, according to a paragraph in the local paper, "he will treat patients according to the most improved principles, either of homœopathy or allopathy."

DR. J. MCCALL has been elected Master Warden of the Marine Board of Leven.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during December to every 1,000 of the population was 2.80, and of deaths 1.50. Males con-

tributed 55 per cent. and females 45 per cent. to the mortality of the month. Children under five years of age contributed 39 per cent. to that mortality, as against 45 per cent. in December, 1893. One hundred and thirty-five deaths, or 20 per cent. of the whole, took place in public institutions.

THE annual meeting of the Medical Society of Victoria was held on January 16th, at the rooms of the society, Albert-street, East Melbourne. Dr. A. J. Wood, hon. secretary, read the annual report of the committee. The report set forth that the roll of members included 20 life members, 151 ordinary, 13 corresponding, and nine honorary members; 21 new members had been elected during the year, and 27 names had been removed in consequence of death or resignation. The following gentlemen were elected to fill the under-mentioned positions:—President, Dr. Rothwell Adam; vice-presidents, Dr. Brett and Mr. F. D. Bird; hon. secretary, Dr. A. J. Wood; hon. treasurer, Dr. Molli-son; hon. librarian, Dr. J. H. Webb. A committee of 10 was also elected for the ensuing year. Dr. Gross-well, the retiring president, delivered his annual address, and the meeting then closed.

DURING the year 1894 there were 381 coroners' inquests held in Melbourne and suburbs. The suicides numbered 38, the accidents 125, and other fatalities 217, including 25 infanticides.

DR. CHARLES DURET, M.D., Paris 1856, a Knight of the French Legion of Honour, who had practised at South Melbourne for 25 years, died suddenly on the 28th December last, at Beaulieu, near Nice (France), aged 66 years.

WE regret to have to announce the death of Dr. Benjamin Clay Hutchinson, M.D., Edin., 1855, M.D. (a.c.g.) Melb., 1884, who died at his residence, at Wangaratta, on January 5th, at the age of 60. The deceased gentleman was born in Notts (Eng.), and arrived in Victoria in 1868. Soon after his arrival he was appointed the first medical officer of the Ovens District Hospital at Beechworth; a few years later he relinquished practice and went to Queensland, where he purchased a station, but not being successful in this undertaking he returned to Victoria, and resumed practice at Wangaratta, where he became medical officer of the hospital, and for many years had a large practice in the town and district. In 1880 he paid a second visit to England, and shortly after his return settled in St. Kilda, Melbourne, where he practised for several years, coming back to Wangaratta in 1891. He was married, and leaves a widow and two children.

ALBERT EDWARD SPROD, M.B., Ch. B., Melb. 1891, formerly a resident medical officer at the Melbourne Hospital, was found dead on the 15th January at his residence at Steiglitz, with a punctured artery, and it appears that he had bled to death.

DR. E. A. COOK has been appointed hon. medical officer on the out-patient staff of the Melbourne Homœopathic Hospital.

DR. J. L. FENTON, formerly of Bright, has started practice at Yackandandah.

DR. P. W. FRASER has succeeded to Dr. J. A. Weber's practice at Natimuk.

DR. C. H. HILL has left Mildura for Western Australia.

DR. G. HORNE has been elected honorary medical officer for the midwifery department of the Melbourne Women's Hospital, in succession to Mr. Prendergast, M.B., who has resigned. The other candidates were

Dr. Walter MacGibbon, Mr. H. P. Martell, M.B., Mr. E. Alan Mackay, M.B., and Mr. F. A. Nyulasy. M.R.C.S.

DR. M. LANG has removed from Yea to Clunes.

We learn that Dr. J. R. M'Inerney, of Fitzroy, has made all-necessary preparations for the successful cultivation of anti-toxin.

DR. J. F. MATTHEWS, formerly of Stratford, has succeeded to Dr. M. Lang's practice at Yea.

WESTERN AUSTRALIA.

THE Government have appointed the following gentlemen to be "The Medical Board," under "The Medical Act, 1894," viz.:—Dra. H. C. Barnett, H. F. Harvey, J. W. Hope, H. T. Kelsall, D. Kenny, F. Tratman, and A. R. Waylen, the latter to be President of the Board.

THE following gentlemen have been nominated to be "The First Dental Board" for the colony, viz.:—Dr. H. F. Harvey, Dr. H. T. Kelsall, Dr. F. Tratman, Mr. R. Norman, Mr. J. V. B. Bingay, and Mr. R. Day.

DR. H. C. BARNETT, of Fremantle, has been re-appointed Medical Superintendent of the Lunatic Asylum, and will in future devote the whole of his time to the management of this institution. Dr. Barnett has retired from the Colonial Surgeoncy, which post he has also held for the last 22 years, and which has now been conferred on Dr. Hope. Dr. Barnett has also given up his private practice, which has been taken over by Dr. L. Wheeler.

DR. J. W. HOPE has been appointed Resident Government Medical Officer and Public Vaccinator for the Fremantle district.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

"The following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Burgess, Thomas William Watkins, L.R.O.P. Lond. 1894; L.S.A. Lond. 1894; M.R.O.S. Eng. 1894.
Berna, Dagmar, L.R.O.P. Edin. 1893; L.R.O.S. Edin. 1893; L.F.P.S. Glasg. 1893; L.S.A. Lond. 1893.
Hepworth, Archibald Franklin, L.R.O.P. Edin. 1893; L.R.O.S. Edin. 1893; L.F.P.S. Glasg. 1893.
Canddy, Andrew Sarsfield, M.D. State Univ. Oregon, U.S.A., 1893.
Langton, Frederick William, M.B. & M.S. Univ. Edin. 1893.
Miller, Oscar Rudolph Percy, M.B. Univ. Melb. 1894.
Hoggan, Bertram Brooks, L.R.O.P. Edin. 1888; L.R.O.S. Edin. 1888; L.F.P.S. Glasg. 1888.
Brown, Thomas William, M.B. & B.S. Univ. Melb. 1892.

NEW ZEALAND.

Gregg, John Lovell, M.B.B.S. Univ. N.Z. 1894.
Dutton, William Henry, M.R.O.S. Eng., M.B. & Ch.M. Edin. 1883.
Neale, Alfred James, M.B. Ch.M. 1883; M.D. Edin. 1888.

SOUTH AUSTRALIA.

Ondmore, Arthur Murray, M.B.B.S. Adel. 1894.
Fischer, George Alfred, M.B.B.S. Adel. 1894.
Goodie, Arthur, M.B.B.S. Adel. 1894.
Hone, Frank Sandland, M.B.B.S., Adel. 1894.

VICTORIA.

Ostora, Harwood Henry, L. & L. Mid. R.O.P. & R.O.S. Edin. 1894; L.F.P.S. Glasg. 1894.
Jamieson, Stanley Connors, M.B. Melb. 1894.
Vale, Grace, M.B. Melb. 1894.
O'Hara, Annie Genevieve, M.B. Melb. 1894.
Brown, George Harward, M.B. Melb. 1894.

Loughrey, Bernard, M.B. Melb. 1894.
Brown, Alfred Austin, M.B. Melb. 1894.
Dombrain, Ernest Arthur, M.B. Melb. 1894.
Vance, William Booker, M.B., Melb. 1894.
Hurst, John Daniel, M.B. Melb. 1894.
Webb, Arthur Bridges, M.B. Melb. 1894.
Williams, Howard Gladstone, M.B. Melb. 1894.
Walsh, Alfred Ernest, M.B. Melb. 1894.
Connelly, Arthur Waldo, M.B. Melb. 1894.
Davies, Edwin Zerubabel, M.B. Melb. 1894.
Gray, Colin, M.B. Melb. 1894.
Hearne, William Weston, M.B. Melb. 1894.
Knight, Glen Alburn, M.B. Melb. 1894.
Laver, Charles William, L. & L. Mid. R.O.P. & R.O.S. Edin. 1894; L.F.P.S. Glasg. 1894.
Eadie, George Alexander, M.B. & Ch.M. Glasg. 1894.

Names Restored to the Register under the Provisions of Section 7 of the Act.

Shirreff, William Henry, L.S.A. Lond. 1879; M.B. & Ch.M. Edin.
Shirres, George, M.B. & Ch.M. 1881, M.D. 1890, D.P.H. Aberd. 1890.

WESTERN AUSTRALIA.

Chater, Arthur Reginald, L.R.O.P. Lond., M.R.C.S.E. 1891.
Hill, Charles Herbert, M.B. 1888, B.S. Melb. 1889.
Outhbert, John, L.R.C.S. Irel. 1885, L.R.O.P. Edin. 1888, L. Mid. K.Q.O.P. Irel. 1885.
Erson, Edward George, L. & L. Mid. R.O.P. Edin., 1876.

MEDICAL APPOINTMENTS.

Bird, Richard Kingston, L.R.O.P., to be Health Officer for Arapiles Shire, N.R., Vic.
Dermer, William Thomas, M.B. Univ. N.Z., to be a Public Vaccinator for the district of Wairoa, N.Z.
Gibbes, John Murray, M.R.C.S. Eng., to be a Public Vaccinator for Bordertown, S.A.
Halahan, Samuel Handy, M.B., to be Health Officer for Kowree Shire, N.R., Vic.
Heard, Charles de Wolfe, L.R.C.P., to be Health Officer for Wyndham shire, Vic.
Lang, Matthew, M.B., to be Public Vaccinator at Clunes, Vic.
Macallan, Thomas, M.B. & Ch.M. Aberd., to be a Public Vaccinator for the districts of Norwood and Armondville, N.Z.
Mackenzie, Murdoch, L.R.O.P., to be Health Officer for Poowong and Jeetho Shires, Vic.
Matthews, James Forrester, M.R.O.S.E., to be Health Officer for Shire of Yea, Vic.
Plowman, Sidney, F.R.O.S., to be Public Vaccinator at Frankston, Vic.
Wall, Max, M.D., to be Public Vaccinator at Bannockburn, Vic.
Wilkinson, Ernest William Campbell, L.F.P.S. Glasg., to be a Public Vaccinator for the district of Foxton, N.Z.
Zieby-Wolnarski, Victor Joseph Emanuel, M.B., to be a Public Vaccinator at West Melbourne, Vic.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

BARRETT.—On January 19th, at Hawthorn, Vic., the wife of Dr. Edgar A. Barrett, of a daughter.
COLE.—On December 31st, at Ayr, Lower Burdekin, Q., the wife of Dr. Arthur Cole, of a son.
IREDELL.—On January 2nd, at St. Kilda, the wife of Dr. Iredell, of a son.
JARVIN HOOD.—On January 31st, 1895, at 178 Forbes-street, Sydney, the wife of the late James Jarvis-Hood, M.B., Ch.M. D.P.H., late of Grafton, of a son.
MACDONALD.—On December 31st, at Murwillumbah, N.S.W., the wife of Roderick Macdonald, M.B., Ch.M., of a son.
MASSEY.—On January 3rd, at Hillgrove, N.S.W., the wife of H. M. Massey, M.D., of a son.

MARRIAGE.

CHALLANDE-LAW.—December 4th, at Coonambula Station, Burnett District (Q.), by the Rev. C. A. Griffith, B.A., Frederick Challands, M.B., Ch.M. (Syd.), of Eidsvold (Q.), to Mary Ethel, elder daughter of the late Rev. Palmer Law.
LUKER—MOOREHEAD.—January 3rd, at Glebe Presbyterian Church, Donald Luker, M.B., Ch.M., of Barraba, N.S.W., to Minnie Constance, eldest daughter of Alexander Moorehead.

DEATH.

WILCOCKE.—On December 31st, at St. Kilda, Melbourne, Lillian Mand, the wife of P. F. Wilcocks, Medical Agent, aged 30 years.

REPORTED MORTALITY FOR THE MONTH OF DECEMBER, 1894.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Mexico.	Scarlet Fever.	Croup and Diphtheria.	Infuenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	111,244	285	174	72	...	1	2	1	8	18	13	6	7	12	2	...	
Suburbs	275,615	748	388	280	...	...	6	2	18	46	25	15	16	10	1	8
NEW ZEALAND.																	
Auckland & suburbs..	42,545	75	48	9	...	...	2	...	2	3	5	4	5	3	...	1
Christchurch ..	41,590	61	35	4	...	...	...	2	...	...	...	2	1	1	...	1
Dunedin ..	48,476	84	36	7	...	1	...	1	...	...	4	2	4	1	...	1
Wellington ..	38,298	75	26	9	...	...	...	...	1	1	1	..	3	4	...	2
QUEENSLAND.																	
Brisbane	56,075	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suburbs	87,583	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA.....	545,888	816	342	119	...	3	7	5	7	28	24	22	29	15	...	6	
Adelaide	89,749	90	79	30	...	1	1	...	3	9	5	3	3	8	...	1	
TASMANIA.																	
Hobart	85,051	88	55	15	...	...	1	...	2	2	5	4	1	1	1	2
Launceston.....	22,674	57	27	12	..	...	...	...	...	...	...	...	...	...	...	1
Country Districts	98,484	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VICTORIA.																	
Melbourne	64,171	109	100	262	...	2	6	2	16	42	72	39	44	25	1	3	
Suburbs	890,661	215	569	
Ballarat and Suburbs
WESTERN AUSTRALIA*	79,665	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending

METEOROLOGICAL OBSERVATIONS FOR DECEMBER, 1894.

STATIONS	THERMOMETER.	° F.	RAIN.	WIND.	Prevailing Wind.
Adelaide—Lat. 34° 55' 33" S.; Long. 136° 36' E.....					...
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.....					...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.....					...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.....					...
Hobart—Lat. 42° 58' 32" S.; Long. 147° 23' 20" E.....					...
Launceston—Lat. 41° 50' S.; Long. 147° 14' E.....					...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.....					...
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 35" E.....					...

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

IS LEPROSY A TELLURIC DISEASE ?

(A paper read in the Public Health Section of the Australasian Association for the Advancement of Science, at the Brisbane Session, 1895.)

By J. ASHBURTON THOMPSON, M.D., D.P.H.,
FELLOW OF THE BRITISH INSTITUTE OF
PUBLIC HEALTH, EXAMINER IN HYGIENE
AT THE UNIVERSITY OF SYDNEY, N.S.W.

UPON the whole, I fail to see that anything has been added to our knowledge of the ætiology of lepra, or clipped away from our supposed knowledge, which requires alteration in the critical remarks made several years ago by Hirsch,* save in one respect. The exception regards heredity. It has always been known, and of course Hirsch noted it, that heredity is no necessary factor in leprosis. We see that leprosy in whites almost always occurs in Australia under circumstances which absolutely exclude it; I am aware of but one exception out of many instances. Secondly, it appears that if heredity have any influence at all in this connection, at all events it is not the disease itself which is transmitted. No child ever has been born leprosy, nor has any ever become leprosy so young that it might reasonably be suspected of having suffered from birth. But whether heredity were a factor of more or less importance in determining leprosis—that is to say, whether lepers could transmit a predisposition to their offspring—was a question which Hirsch inclined to answer in the affirmative. Recent investigations made on a large scale seemed to show that at all events heredity exercised no such indirect influence of that kind as could be appreciated. The Leprosy Commission in India did good work when they pointed out that leprosy in parents was not associated with an incidence of leprosy on their children greater than the incidence on children born of healthy parents, and living on the same leprosy area, on the one hand; on the other, that the parents of lepers were not lepers themselves in any greater proportion than other persons living on the same leprosy area whose children were healthy. And as to the practical question whether hereditary disposition were among the causes of the maintenance of lepra, the Commission showed very clearly that it might

be excluded from consideration in all discussions of that point: for they showed, first, that lepers produce but few offspring at most; and secondly, that such as they do produce are extremely liable to die at young ages from indifferent causes. Probably, then, heredity has no share in determining leprosis, and certainly it has no share in maintaining lepra present among mankind.

Only one other suggested explanation of the maintenance and diffusion of leprosy has received very general attention, and that is the contagion hypothesis. In accordance with the opinion I expressed at first, I think we cannot do better than follow Hirsch's account of it.

Hirsch pointed out, in the first place, that the doctrine of contagiousness had been in favour from the earliest times; but, then, there is no doubt, the diagnosis of leprosy was but ill-established, and several other chronic and disfiguring diseases, and especially syphilis, were confounded with it. As long as the diagnosis of syphilis continued uncertain, so long did the doctrine that leprosy was communicable by the sick hold its ground. No sooner did men begin to learn to recognise syphilis with some certainty than the doctrine of the communicability of leprosy began to fall into disrepute; and at last it came to be almost entirely rejected. But soon after Dr. Hansen's discovery of the *b. lepra*, in 1872, opinion began to change again; and when Dr. Neisser, in 1881, sufficiently established a necessary or causative connection between Dr. Hansen's bacillus and leprosis, the doctrine of communicability began once again to come into favour. That doctrine fits in so well with preconceived notions which date from antiquity, and is at first sight so natural, so easy, and so complete, that it is not surprising that many of the profession as well as the public in general should have adopted it. But Hirsch pointed out—and his remark has all the force to-day which it had when he first made it—that in reality Dr. Hansen's discovery did not at all justify the inference commonly drawn from it. He said:

"It is only an *a priori* proof of the conveyance of leprosy by contagion which Neisser adduces, when he states, on the ground of the finding of bacteria, and of the hypothesis therefrom deduced, that the malady is contagious in its specific products," and "contagious not only directly, but also indirectly, by articles which serve to carry the bacilli and their spores."*

* It should be noted that Dr. Neisser expressed this opinion nearly fifteen years ago. I do not know whether he has more recently confirmed it; if not, it is, of course, possible he might now modify or explain it.

That, evidently, is a just criticism; for what is required is proof that leprosy actually is directly or indirectly conveyed, and not merely an inference from analogy that it ought to be, or must be, so conveyed. But no sufficient experimental proof of Dr. Neisser's assumption ever has been given.

In this discovery of the *b. lepræ*, then, and of its causative connection with leprosy, we ought not to see a proof that leprosy is communicable by lepers; we should see in it only the proof that leprosy must be classed among the infective processes. All the infective diseases are not maintained by communication with the sick, it will be remembered. Thus, tetanus is an infective disease; yet, as a matter of practice and of fact, tetanus is not in the least maintained by communication between those suffering from it and the healthy.

Now, as to the direct communicability of leprosy, probably no important difference of opinion longer exists. Probably no one of great weight would roundly deny that leprosy may, perhaps, be directly communicable from the sick to the healthy. We have, I think, no proof of it, but that is not a sufficient reason for denying it; and, indeed, there is one case,*—though, as far as I know, one only,—in which direct communication seems to have occurred: one only, I mean, in which the circumstances seem to have been observed and recorded with accuracy, and in which all causes but direct communication seem to have been excluded by them. However, Hercules is not known by his foot alone. On the other hand, I scarcely think that anyone of very great weight would at this day assert that leprosy was *maintained* by direct communication, in the face of well-ascertained epidemiological facts concerning this disease the world over. Here, again, we have not to go outside Australia in order to perceive that as a matter of fact leprosy cannot be directly communicated, except very rarely indeed at most. I know of only three cases out of many in whites (among whom alone the details can be accurately learned) in which known direct communication with a leper could have operated to cause the second case; and those instances are on all-fours with the examples usually cited in support of direct communicability, and, like them, are liable to criticism of damaging kinds. On the other hand, though we imprison our lepers rigorously as soon as we discover them, generally we do not discover them until they have been at large for several years; and yet fresh cases do not usually occur in the household in which they lived, and which was certainly thus exposed for long to whatever risk attaches to free communication with the sick, but by far the most often in fresh households altogether.

That Australian experience is far from being exceptional. Everyone is familiar with the fact that lepers who have contracted their disease abroad return to Europe and live there in quite ordinary contact with others—sometimes at home, some times in the general wards of an infirmary or an hospital, and yet do not communicate their disease. There is, I believe, but the possible exception I have already mentioned, and one or perhaps two others which give ground for suspicion. We know also, and on the unusually good authority and personal observation of Boeck in 1870 and of Dr. Hansen more recently, that 160 lepers who emigrated with their families from Norway to some of the northern States of America, and lived there under no restrictions at all, were found on being traced to have communicated their illness to no one—Norwegian, American, or other. So that, as regards direct communication of this disease, we may well admit that it is a possibility, (although we have no proof of it), and yet we can point to well-ascertained facts which at least forbid us to regard direct communication with the sick as the means by which leprosy is *maintained*, or to regard a leper as constituting any important danger to those who come into contact with him.

Now, if you feel inclined to disagree with that conclusion (notwithstanding your own Australian experience), you will have no difficulty in finding a hundred accounts which have been tendered to prove that leprosy is easily communicated by the sick, and that the disease is so *maintained*. I have but one word to say in reply. I merely ask you for the future to read those contrary accounts critically, and to accept those alone which are recorded with sufficient fullness as regards the essential details, and, at the same time, are entirely free from the *post hoc* fallacy. You will find that a vast majority of such instances are spoilt from the beginning by having been observed on areas of recognised endemicity, so that primary and secondary case alike were under the influence of locality. Apart from that, you will find very few indeed which answer to the two requirements mentioned before—one or both.*

After a not inconsiderable course of study, I take it that, in any mind seized of the facts, and in the habit of weighing evidence, there can be no doubt at all about this—that leprosy, if at all communicable by the sick, must be so only with

* Nearly 30 years ago the Committee of the Royal College of Physicians remarked in their Report (1867) that the cases cited to them in support of contagiousness: either rested on imperfect observation, or were recorded with too little attention to the necessary details to be of service. If the reader doubt whether it be still necessary to make a similar criticism, he need only refer to Dr. Hillis' work, 1881, pp. 177, *et seq.*, and to a work published more recently (Leprosy, by George Thoin, M.D., London, 1891), and peruse the very long string of "cases" cited therein, in order to satisfy himself that it is so.

* Dr. Hawtrey Benson's, *Dublin Journal of Medical Science*, 1877.

great difficulty, and under special and quite unknown circumstances. Even some of the writers to whom I have just referred, and who have asserted that leprosy was so communicable (though without distinguishing between mere occasional communication, and such a common or frequent communication as would account for its maintenance), seem dimly to have perceived this; and, consequently, they usually postulate long-continued and intimate contact between the sick and the healthy as a necessary condition of communication. But you must perceive that this postulate is a sacrifice to a speculative opinion; for the records are full of cases of leprosy in which the sufferers never had been in long-continued, nor in close, nor in any conscious contact at all, with any leper. You will see this at once, too, because Australian experience of leprosy in whites shows, beyond possibility of doubt, that this disease certainly can be contracted quite independently of intimate contact with lepers. Our own experience shows us that this can happen, and even that it most usually is the case. Now, if known long-continued contact with lepers is most often supported without the disease being communicated—I mean, of course, without any second case occurring in the household of which the solitary primary leper was a member, and therefore without even apparent or *prima facie* evidence of communicability being afforded—we are logically warranted thereby in saying, not in general terms that leprosy is a disease difficult to contract, or one to which a majority of persons are naturally resistant (for that would beg the question), but merely that at all events leprosy is a disease very difficult to contract from lepers. And therefore, when on the other hand we observe that leprosy very often does occur in persons who have been in no conscious contact with any leper, when we notice that close or long-continued contact with lepers is certainly not essential, we get (as it seems to me) a very important suggestion. The two facts taken together—for they are both well-established, commonly known, and such, moreover, as might be safely relied upon even if there were no other evidence of them than our own Australian experience—these two facts taken together seem to me to point to this: that leprosy may be a disease not at all difficult to contract, provided the virus in efficient form be met with under favourable external circumstances, among which presence of an actual leper is probably not essential.

There are two views which must be met after setting out the foregoing argument. They are entertained by writers who either do not explicitly state that prolonged and intimate con-

tact with lepers is necessary, or who implicitly deny its necessity by relying on indirect communication of the virus by the sick.

Those who do not explicitly require long-continued contact have pointed out that as a very long latent period is commonly conceded to leprosy, it must always be difficult, and sometimes impossible to trace the human source of the infection. I think this remark must have originated with someone not in the habit of tracing the course of outbreaks of communicable disease. If individual cases of leprosy were alone to be examined, it would have great force. But it would have equal force if examination of individual occurrences of influenza or cholera were examined to learn whether those diseases were communicable by the sick, brief as the latent period is in them. It is not thus, in short, that the communicability of diseases is, or can be, established. The communicability of diseases can be examined only by comparison of the broadest epidemiological facts.

The other point has been indirectly raised by those who have suggested that leprosy was *maintained*, not by direct communication with the sick, but by indirect communication—that is to say, by way of the soil infected by bacteria cast off from the bodies of (tuberculous) lepers. This view seems to have been based on an analogy with tuberculosis. In that disease efficient bacilli are known to be cast off, and are known to be capable of surviving in efficient form for long after they have left the body. Tuberculosis is, doubtless, thus indirectly communicated by the sick; though such communication is not the only nor, it may turn out, the most important means of maintaining this disease.

Now, first I must remind you, however tempting and probable the analogy may seem, that we know nothing whatever of corresponding facts concerning the *b. leprosa*. We do not in the least know whether it is an endogen or an ectogen. But, beyond that, we have seen that leprosy is communicated by the direct channel (if at all) with great difficulty. Whatever the reason may be, that seems to be the fact. That being so, I do not understand why it should be supposed to be more easily communicable by an indirect channel. If, nevertheless, it demonstrably were so (but there is no better evidence of indirect than of direct communication within households) the explanation would surely lie in the *b. leprosa* being an ectogen, and in its return to the earth or to some habitat outside man being a condition of the easy infection of fresh persons. It may be that indirectness of the channel was not supposed to enhance communicability, but merely

to facilitate communication by bringing the virus into contact with a larger number of persons, and affording it, consequently, a freer opportunity of encountering the few among them who were susceptible. In that case we should still have to remark, first, that indirect communication does not seem to occur within households any more than direct communication does; this reply would hold until susceptibility should have been proved to be a very special condition: and, secondly, that in that case imported lepers ought to establish new leprosy areas. This second point requires examination at some length. It is crucial for any mode of communicability, and for my own part I do not think the facts support it.

We know perfectly well that imported lepers do not always create a new area of endemicity (if they ever do so), as they ought on the hypothesis of direct or indirect communicability. The case of the Norwegian lepers in the States is one in point; that of lepers returned to the cities of Europe is another. I refer again to these two examples because the facts concerning them are perfectly well-established, and especially because the fact that these areas are not areas of endemicity is ascertained. I know you would have no difficulty in culling from books many round statements that such-and-such areas were contaminated by imported lepers, and were, in consequence, newly-made areas of endemicity. Now, you will observe, no doubt, that if these assertions were substantial, if they were warranted by perfectly clear evidence, the whole question of the etiology of lepra would be thereby settled once for all, and in the least disputable way. It would be proved thereby that leprosy was maintained by communication with the sick, and whether the mode were direct or indirect would become a secondary question, and, for preventive purposes, no very important one. I lay stress, therefore, on the counter-statement which I am about to make. It is simply this:—In not one of the cases of alleged importation of leprosy which thus far I have studied, have I been able to find anything that, could reasonably be regarded as evidence of the assertion, vital though it obviously is. The datum, without which the whole case must fall to the ground, never is ascertained; namely, the freedom of the dwellers on the area under examination up to the date of the known importation of lepers.

Thus, for instance, the prevalence of leprosy in Europe in the Middle Ages is frequently—and I venture to add, lightly—ascribed to the return of leprous crusaders from the East. But

according to Haeser,* quoted by Sir John Simon, notices of leprosy in Europe go back to the fourth century, and in the sixth and seventh centuries there were already leper-houses in France and Lombardy; and that makes it impossible to exclude the influence of locality, and to distinguish the alleged epidemic from recrudescence of a local infectivity. Then, again, you are all aware doubtless that the present prevalence of lepra among the natives of the Hawaiian group has frequently been, and indeed is usually, ascribed to the importation of Chinese lepers about 1855 or 1860. But if you consult the papers on leprosy in Hawaii, collected by the Board of Health, and the review thereof by the Hon. Walter M. Gibson, the Minister who presided over the Board and over collection of the documents referred to, you will have no difficulty in perceiving, first of all that the beginning of leprosy in that group is unknown, and secondly that there is strong reason to believe that the disease was present among the aboriginals as early as 1822—and how much earlier no one knows, nor ever will know now. With these opinions Dr. Arthur Mouritz, who, as well as Mr. Gibson, had taken great pains to learn the history of the endemic there as far as it could be learned, agreed in an Appendix to the collection, the whole of which was issued in 1886.† Another example may be found in Dr. Goldschmidt's recently-published account of leprosy in the island of Madeira.‡ The author said that Madeira was discovered in 1419, and was found to be already inhabited; the Portuguese occupied it, and many immigrants from Portugal were introduced, a great many convicts and people of the lowest class among them. Then, leprosy was present in Portugal at that date, as it was over the rest of Christendom. Lastly, before the year 1500 it became necessary to establish a lazaret on the island. These data are ascertained, and the author's probable supposition that some lepers were present among the Portuguese immigrants may well be accepted. But when, on the strength of these facts, he asserts that leprosy appeared, spread, and persists to this day in Madeira in consequence of that early importation of Portuguese lepers it is impossible to go with him, for he has said nothing of the state of the aboriginals. They may have been lepers when the island was discovered; nothing at all is known about that. It

* "English Sanitary Institutions," 1890, p. 36.

† Report by the President of the Board of Health to the Legislative Assembly of 1886, on Leprosy. Honolulu, H.I., 1886.

‡ "La Lèpre: Observations et expériences personnelles." Par le Docteur Jules Goldschmidt, Paris, 1894.

is misleading to speak of such cases as those I have mentioned, and some others which you will notice from time to time if you read with sufficient cautiousness, as though there were evidence to establish a fact, and especially a fact such as this which really is of fundamental importance. The truth seems to be—and all who have critically considered writings on the course of leprosy cannot but agree with me—that writers on this subject usually entertain the prepossession that lepra is *maintained* by communication with the sick, and forthwith either unconsciously bend the facts to accommodate their prejudice, or, which comes to the same thing, take for granted in favour of their prejudice a great many important points as to which there is in reality no evidence at all.

Hitherto I have spoken only of a contagium, and of man, as though conjunction of the two were all that was necessary, and as though all men were equally susceptible. If it were thought that the contagium resided in localities, then very little could be said as to comparative susceptibility, for reasons which I shall give before concluding; but if it were assumed that the contagium was communicated by the sick, then it would be pretty clear that all men were not equally susceptible of it. Now, therefore, I must make further reference to the report of the Leprosy Commission in India, from which I have already drawn important details, although I find myself unable to accept all its conclusions.

The Commissioners espoused a theory of maintenance by indirect communication, which I have already mentioned, and probably they were aware of the difficulty I have just pointed out—that either there was in reality no good evidence of the spread of lepra by importation, or else that in ascertained cases, such as the importation of lepers in modern times to Europe or to America, it was clear that importation did not and does not give rise to new areas of endemicity. At all events, their reference to the function of natural resistance was by way of meeting this difficulty among others. They suggested that lepra would be likely to spread or to be maintained by indirect communication when the disease was introduced, or existed, among a people whose natural resistance was reduced by poverty in general—by food in some measure inadequate to physiological needs, and by the insanitary conditions usually found concomitant therewith. Notwithstanding the source of this view, I venture to say that I have not yet succeeded in seeing anything more than a platitude in it, no suggestion having been made (though an implication there unavoidably was) that reduced efficiency

of the defensive function stood in any special relation to leprosy among all the infective processes. It seems to me, therefore, to be a generality. We are but just beginning to learn something of the physiology of defence, it is true; but clinicians have always observed that of all the not specially protected persons exposed to infection, whatever the disease might be, some resisted it and escaped. And clinicians have always seen reason to believe that poverty and filth in some form were predisponents to many of the infective processes, and therefore we may suppose it possible that they dispose to leprosy too. So that it must be asked what this proposed explanation amounts to. Does it exclude the inhabitants of any country? Are there at this day no poverty and filth in Norway, where lepra began to diminish long before the measures of partial and imperfect isolation in force there could have taken effect? Are there none in the great cities of Europe to which lepers return, and where they live harmlessly as regards their neighbours? And, after all, is it not the case that of all the poverty-stricken on recognised leprosy areas a very large majority escape the disease—that lepers are found, at most, in but very low proportion to the total poverty-stricken population? From the account of leprosy in Madeira which I quoted just now let me give you a very striking example of this. On that island all lepers were never isolated, though there was a lazaret to which poor lepers only were forcibly removed from all the parishes on the island until 1860; and since 1860 all lepers have been entirely unrestrained. The people themselves do not regard lepra as a communicable disease; they ascribe its occurrence to the use of a certain vegetable, and in consequence regard cases with perfect indifference, and live in quite ordinary contact with the sufferers. Now, the area of the island is very small—about 780 square kilometres,—and its population is about 180,000, so that the density is uncommonly high, or 170 to the square kilometre. The author said—and observe that he was not then dealing with a matter of ancient history, as he was when I quoted him before, but was giving the result of his personal experience during the past twenty-six years—that it might be taken that two-thirds of the close-packed population, or about 80,000 of the people, lived in *la misère* (a scarcely translatable term which means, on the whole, incessant labour rewarded by earnings which scarcely suffice to provide food adequate to the labourer's physiological expenditure), and that the state of the people was still going from bad to worse. Hence, if leprosy were maintained by direct communication with the sick, or by indirect com-

munication, or if natural resistance to leprosy in particular could be impaired by a lifetime led in *la misère*, or if loss of natural resistance were indeed the determining cause of the endemic persistence of leprosy, then Madeira at all events ought to be ravaged by this disease. But what is the fact? The author reckoned but seventy cases in the whole island.

Thus I consider that the epidemiological facts no more support the theory of indirect communication than they support the simpler hypothesis of direct communication. This seems to me to be clear, but on the all-important condition that facts alone shall be allowed weight, and that guesses and assumptions shall be recognised and discarded. On the other hand, the character of leprosy, as deduced from a general survey of its behaviour the world over, is that of an endemic disease; of a disease which is essentially connected with locality. If a man visit a recognised leprosy area he runs an appreciable chance of contracting leprosy; but if a leper go to Europe his neighbours are in no more danger of leprosy than they were before he returned among them.

If we confine ourselves to a pathological view, many of us will feel inclined to say that probable analogies class the *b. lepræ* with the endogens. But to the extent of my researches, the epidemiological facts seem to me to point to its being an ectogen; and not merely such an ectogen as the cholera vibrio, but rather such as is the bacillus of tetanus. Nor need it be supposed that on this view leprosy should be much more common than it is, even on areas of its endemicity. The defensive function is not to be undervalued. It may well be that our phagocytes are usually victorious over that ancient enemy, the *b. lepræ*. But beyond that, we now know, thanks to the labours of M. Metschnikoff (cholera*), and MM. Vaillard, Vincent, and Rouget (tetanus†) that successful infection is not always due to weakening of the defensive function by agents which are "depressant" in general terms. Men do not acquire tetanus, for instance, merely because they happen to be out of health when they receive the virus; clinically no fact is better known than that, I suppose. Nor do those who drink too much beer or eat too much fruit during a cholera epidemic succumb to cholera merely because they have become generally depressed by drunkenness or by diarrhoea. No; it is the concurrence with the *b. tetani* and the *vibrio cholerae* of other organisms—quite harmless in themselves, it may be—which gives those bacteria their surest op-

portunity of evading the natural defenders of the body against them. Thus, if we supposed for a moment that concurrence of some other sort of organism with the *b. lepræ* were necessary to successful implantation of the latter, we could understand how it might happen that of all the people living on a tract of country freely infested with the cause of leprosy only a few would become lepers. Do not forget that all this is but speculation as regards leprosy. I think it is surely founded on ascertained epidemiological facts; but through experiment alone can the superstructure be safely raised.

When I framed this communication I had no intention of producing a mere polemic. Probably that is evident from what has now been said; and in that case you will, perhaps, have been surprised that I have but little referred to the course of leprosy in Australia. I presume that each of the five Governments took the rational precaution of ascertaining what that course had been before enacting the extremely severe laws against the liberty of lepers which they have adopted, and at this moment enforce in five colonies—before they ventured to add the remarkable hardship of imprisonment for life to the affliction of incurable disease. I cannot suppose that they failed to do this, although no evidence of it has ever come to light; for I will not suppose that with ample medical advice at their command they treated their people like chattels and as though, if in those enactments they should ultimately find they had fallen into error, they could defend themselves by airily alleging that at all events their mistake had been on the right side. I will not for a moment entertain a supposition so injurious—injurious not merely to Governments, but to the people who otherwise acquiesced in a flagrant infringement on personal liberty. Doubtless, the facts regarding leprosy over the world in general, and particularly the facts regarding leprosy in Australia, were carefully gathered and critically examined, before so momentous a step was taken as that which declared that every leper should for the future be rigorously imprisoned for as long as his incurable malady should permit him to survive; that he himself and all his family should for ever suffer because it was essential to the public good.

And yet the people, and yet you yourselves, do not know the precise grounds on which those enactments were made; you do not in the least know what the course of leprosy in Australia has been; you cannot tell whether it has been such as manifestly supports, or merely fails to support, or manifestly contradicts the belief that leprosy is *maintained* by communication with lepers. For want of that information the salient

* Ann. Inst. Pasteur, 1892-4.

† Ibidem, 1891-2-3.

characteristic of those laws must seem in the eyes of some to be renascence in the nineteenth century of the product of mediæval ignorance into mediæval egoism. Should not the strong evidence which, no doubt, exists in the archives of one or more of the five Governments to show that the practice of the middle ages was wise and indispensable, and therefore still is necessary in Australia, be now—though late—produced to us?

In the meantime, though you have not been told anything about the epidemiology of lepra in Australia, you do know the facts concerning individual cases which have occurred among you, and which you have yourselves witnessed. I ask you, therefore, after every prejudice, all imperfect observations, all traditional opinions, and easy-going assumptions have been coolly identified and then rigorously cast out and rejected, to consider whether those cases, as far as they go, do support the popular belief that leprosy is *maintained*, or kept present among mankind, by contagion.

TYPHOID FEVER AT COOLGARDIE.

BY FRANK TRATMAN, M.D. LOND., M.R.C.S.,
L.R.C.P., D.P.H. ENG., OF PERTH, WESTERN AUSTRALIA.

THERE has probably never been a more widely and quickly spread epidemic of typhoid fever than that which has fallen upon Coolgardie during the last twelve months. The number of cases coming under medical observation is very great, but these represent only a fraction of the total, as there are so many of a mild form, permitting the patient to walk about during the whole period of his illness. It is not at all uncommon to meet in the streets of this town persons whose peculiar aspect irresistibly suggests typhoid, the suggestion being often verified by their coming under observation afterwards.

It is easy to understand how infection is spread broadcast, when so many are about who do not suspect what they are suffering from.

Infection was no doubt taken in the first place to Coolgardie from Perth, where it has been endemic for many years. The revenge is complete, for now our capital city receives cases from Coolgardie almost daily.

But the matter is not of local interest only; it affects the whole of Australasia. The interchange of persons between Coolgardie and the rest of the continent is great and continuous, and the outgoing stream contains a proportion of persons in the early stage of typhoid, who, feeling

ill, are anxious to get back to their homes. In so doing they leave behind them a trail of infection. The continent is now being reticulated with such lines, all conveying westwards and meeting in Coolgardie.

The etiology of the disease in the goldfields is instructive. Coolgardie may be taken to be a waterless desert—that is, without rain or fresh underground water—and it is evident that the usual mode of spreading by the distribution of an infected water supply cannot be operative to any great extent. That it accounts for some cases there is no doubt, as the persons who sell condensed water are often in the habit of adulterating it with about twenty-five per cent. of uncondensed water, finding that such an amount can be added without making the mixture undrinkable.

Besides which, rain does occasionally fall, its effect being to wash the surface filth, which is deposited indiscriminately into water-courses or drains which collect for the artificial dams. This water taken straight from the dams is still the favourite beverage of thoughtless men. There is even in the minds of some a prejudice against condensed water, from its effect of producing diarrhoea in those not accustomed to it, the diarrhoea being considered the beginning of the fever.

These methods are sufficient for the distribution of typhoid in a large number of instances, but there are numerous other instances where the sufferers have taken nothing but unadulterated condensed water from their own condensers, and yet have been severely attacked.

The only other available medium for the carriage of infection is the air. It may be taken as certain that under ordinary conditions the bacillus typhosus gains access to the human intestine when in suspension in liquids, generally water or milk; while universal experience goes to show that the specific bacillus does not exist in the air round about a typhoid patient. The reason is that the dejecta, whether disinfected or not, are *never dry*. Were the dejecta allowed to become dry the bacilli would be distributed in the air, just as the bacillus tuberculosis becomes suspended in the air round tuberculous patients whose sputum is allowed to dry on the floor or on handkerchiefs. What happens at Coolgardie is this: The mild ambulatory cases, of which there is a great number, some knowing and others ignorant that they are suffering from typhoid at all, deposit their dejecta at random upon a perfectly dry and hot soil under a perfectly dry and hot atmosphere. It is quickly dried, pulverised, and carried away by the wind.

The soil is so friable that the air is continuously laden with a cloud of red dust. Upon this soil

the dejecta are laid, and almost immediately become swept away in the dust. The bacillus, under these conditions, is exposed to a bright light and a great heat, which would in time sterilize the fluid in which they are contained, but long before this could happen they are dried up and blown into the air, which, being diathermanous, keeps them comparatively cool.

Janowski's experiments upon the effect of high temperature were made on the typhoid bacillus. He found that a temperature of 55° C. continued for ten minutes was sufficient to sterilize the cultivation in fluid media, but he also found that "where they were allowed to dry, this did not appear to hold good to nearly the same degree" (Woodhead), and the temperature at Coolgardie very rarely rises to 55° C.

Roberts, after stating that water and milk are the usual channels of infection, acknowledge that the poison may gain access to the body by the inhalation of tainted air.

The facts briefly are, that the great majority of those on the goldfields drink nothing but unadulterated condensed water; nevertheless, great numbers of them are attacked by the fever. From these considerations the conclusion is justified that the usual mode of infection is by inhalation of bacillus-laden air.

The scientific prophylactic measure—the disinfection by each individual or his attendants of every evacuation—would, of course, be absolute; and as it is the only certain means of prevention, it would seem to be right that the simple facts of the matter should be taught to the population either by lectures, conversations, or handbills such as are used by some sanitary authorities in England, and at the same a free gift made to each miner, of a small bottle of concentrated solution of corrosive sublimate in hydrochloric acid coloured with methylene blue, with directions for its use.

It is impossible for any individual to protect himself. He can be careful that his food and all his drinking-water is cooked, and can avoid the common fallacy that whiskey and water is a sterile mixture, but the real danger can only be avoided by wearing a cotton-wool respirator over nose and mouth, which any man in that stifling atmosphere would rather die than do. Though sound individuals cannot protect themselves, those attacked can protect others by the simple precaution mentioned. A public feeling should be created upon the matter, but this is probably impossible in a mining community, and it only remains for every Medical Officer of Health to stand sentinel at the end of his own particular infection-line, and let none pass unchallenged.

Perth, February 22, 1895.

A CASE OF ECTOPTIC GESTATION.

BY GEO. REGINALD EAKINS, M.D., SURGEON-MAJOR, VICTORIAN MILITARY FORCES,
- ECHUCA, VICTORIA.

A. T., aged 34, the mother of four living children, and who had not been pregnant for the last ten years, consulted me in the beginning of September, 1894, stating she was pregnant, that since conception she had suffered greatly, and was in continual ill-health. On examination I found the abdomen enlarged to the size presented at the sixth month, and all the usual signs of pregnancy present, except that on vaginal examination I found the uterus and cervix in its normal state; as I believed; and remembering that I had curetted this uterus some four years previously for the cure of chronic endometritis and left salpingitis, and established free drainage, I had very grave suspicions that this was a very unusual case. The tenderness of the abdomen, and the pain my examination caused, precluded me at that time making any further or a confident diagnosis. She was relieved from pain by occasional doses of nepoche. On Nov. 20th I was sent for, the messenger saying Mrs. T. was then twenty-four hours in labour and in much pain, and would I come at once. On my arrival, inquiry elicited that her pregnancy up to date was eight months and a fortnight, and that there was a sanious discharge from vagina, with abdominal pains. Examination showed a cervix dilated sufficiently to admit the index-finger, and exploration revealed an empty uterus, thus confirming my previous diagnostic suspicions. I laid the case before those interested, but the desired consent to operative delivery was not obtained until the following morning, the woman in the meantime being in considerable pain and in a very anxious state. Accordingly at 10 a.m. the woman was placed under chloroform by Dr. W. Fowler, and diagnosis further and absolutely confirmed by a complete exploration of uterine cavity. A catheter was passed and the abdomen was opened in the linea alba by an incision about four or five inches long, between the umbilicus and pubes, under the usual antiseptic precautions; the sac was reached, and a trocar introduced, which showed the placental attachment under line of incision. An incision was then made right through the placental site. A leg was seized, and the delivery of a living, healthy female child quickly effected. The hand introduced into the bottom of the sac showed it originated from the region of the left ovary. As the bleeding from cut placenta was terrific, a towel as a tampon was wrung out of hot carbolised water and quickly stuffed into the cavity of the cyst,

which in so doing was unfortunately torn. When hemorrhage was controlled the oozing which had taken place amongst intestines was sponged out, and as the patient was in a very collapsed condition, about a pint of warm sterilized solution of chloride of sodium, 8 gra. to the ounce, was poured into the abdominal cavity through the rent and left, the torn sac was stitched with silkworm gut, as were also the edges of the sac to the abdominal parietes, wherever adhesions were weak, or were required. No attempt was made to remove the adhering placenta, for obvious reasons; the sac was then stuffed with iodoform gauze, removed on the third day, and antiseptic irrigation constituted the rest of the treatment. Everything went on satisfactorily, the patient being able to urinate, and also had several movements of the bowels daily, and taking and retaining nourishment well, until the tenth day, when the patient, out of morbid curiosity, removed the antiseptic coverings "to see what her innards was like," and got badly fly-blown in consequence. This indiscretion was repeated more than once; the utter indifference of the woman herself as to the ultimate result, the poverty, absence of skilled, or for the matter of that of any nursing, and various undesirable and insanitary surroundings proved too much, the patient dying on December 7th, of toxic poisoning and exhaustion, exactly seventeen days after operation. This was a miserable termination to what might, and would have been under other or even ordinary circumstances a brilliant result of obstetric surgery.

THE ETHER ANÆSTHESIA AND ITS ADVANTAGES, ESPECIALLY FOR ISOLATED PRACTITIONERS.

By J. COLPE, M.D., SYDNEY.

THAT of the two rival anæsthetics, ether and chloroform, ether is by far the safest, has during the past few years been proved beyond the possibility of a doubt, and consequently a great number of operators have recently been returning to the use of ether. While in 1890 the Association of German Surgeons, for instance, could only report 470 cases of ether narcosis, the total record for the four years, 1890-3, stood—166,812 operations under chloroform, with 68 deaths (—1: 2,677) and 26,820 operations under ether with 2 deaths (—1: 13,160). But of the two cases of death under ether, one (which happened in the Moabit Hospital at Berlin) is generally not counted, and is considered as having been easily avoidable; the septic patient was operated upon while his stomach was loaded, and he died through suffocation, some vomited matter having been aspirated. In the other case bromide of ethyl had at first been

given, and when it was found unsuitable, ether was substituted, ten ounces having been administered in forty-eight minutes, when death took place.

In Australia, ether seems to be not by far so generally used as one would expect. This is evident alone by the excessive price charged here for the drug. In Sydney, ether suitable for narcosis (Squibbs') cannot be procured for less than 11s. or 14s. a pound, whereas in Germany Merk's ether "pro narcosi" (the quality of which is uniformly faultless) sells at 9d. to 1s. per pound. This enormous difference in price is principally explained through the scarcity of demand, the freight on small quantities of ether, as an explosive, being excessive. Mr. Merck's representative in Sydney states that if there was a demand for large quantities of ether, it could be retailed at 5s. per pound—a price still high enough, but more within the boundaries of reason. Knowing from personal experience that a good few Australian practitioners never use ether at all, or quickly abandon it again, while being dissatisfied with one or two trials, I should like to point out a few facts of practical value for the administration of ether.

The ether anæsthesia, besides being the safest, has for the Australian country practitioner, who so often operates without skilled assistance, the additional advantage that it can so easily be regulated by the operator himself, the sense of hearing being in the majority of cases quite sufficient for control. The operator, with a little experience, need not examine the patient's face or pupil, he never need feel the pulse. The regular and vigorous, though somewhat laboured and noisy breathing is a perfectly safe indicator of the progress of the narcosis, while eye and hands are being occupied at the wound. From any alteration in the rhythm and sound of the respiration, an experienced man, without looking up, can easily tell if the patient is likely to wake up, if paralysis of respiration is imminent, if the air passages are getting blocked with mucus, or if any other complications are taking place.

In all cases where the ether narcosis has been pushed too far, either inadvertently or by way of experiment, disturbance of respiration has taken place a considerable time before the heart became affected. Two cases are recorded where spontaneous respiration had ceased for over thirteen minutes without any alteration in the pulse. To control the heart's action by feeling the pulse is, therefore, one may safely say, never necessary for the operator as far as the anæsthesia is concerned. If the heart fails from loss of blood during operation, the question is, of course, not one of anæsthetics.

A sudden total stoppage of respiration only indicates that the patient is about to vomit, and it is of no importance. The commencement of genuine central paralysis of respiration is marked through the respiratory movements becoming shallower and shallower. If ether is then discontinued, or if artificial respiration is resorted to, the danger always passes off safely and quickly. But if the paralysis of the respiratory centres is not noticed, and if ether is administered until the heart's action also ceases, death is almost certain to take place. Cases in which paralysis of the heart preceded paralysis of respiration are not recorded. Neither has a case of primary reflex syncope of the heart, which sometimes kills like lightning at the very commencement of the chloroform anaesthesia ever been observed with ether.

Another advantage of ether anaesthesia is the possibility of undertaking long-lasting operations on persons in a low general state of health, where chloroform would be out of the question. Furthermore, in cases of fatty degeneration of the heart, or in severe traumatic shock, ether stimulates the heart, and a deep ether narcosis is perfectly permissible, perhaps even beneficial, whereas under these conditions chloroform would be so extremely dangerous that here one could almost call its administration criminal.

The after-effects, also, are in most instances less disagreeable than they are after administration of chloroform. But vomiting is frequent, and altogether I must confess that on this point I have not found the difference so very much in favour of ether as some surgeons will make it appear. When patients who have been subjected to both forms of anaesthesia are questioned which they prefer, they are about evenly divided. I believe this depends chiefly on the way in which they have at first been approached by the anaesthetist. Fatal after-effects in a remote period, however, need not much be feared. Dr. Teichmann, in last issue of the *Gazette*, points out that "very often fatal lung complications take place." I will admit the fact, but not the "very often," and I maintain that these were, almost without exception, cases where ether was altogether contraindicated, or where it was administered carelessly—liquid ether having entered the lungs. Cases of "suppression of urine" (inflammation of kidneys?) after ether, as mentioned by Dr. Teichmann, I have never seen; but I have read statistics by Dr. Garré, and very recently of Barenfeld, clearly showing that the dreaded "ether-nephritis" is a myth, and that existing nephritis does not become worse after administration of ether. Neither has a case of "chronic ether-poisoning" (fatty degeneration) been observed.

An empty stomach is a "*conditio sine qua non*" for a good ether anaesthesia, and, when one cannot choose the time for the operation, it is essential that the stomach should be washed out; if this is neglected, a very awkward narcosis is liable to follow.

To bring a patient gently and quickly under the full influence of ether requires, I think, considerably more experience and confidence than chloroform does; but after full anaesthesia has once been well established, any person of normal intellect is almost quite as useful as a skilled professional anaesthetist would be. I would therefore strongly advise the isolated practitioner always at first to administer the drug himself, and to do this, if possible, not on the operation table, but while the patient is comfortably in bed. Not before the stage of excitement is over, and all inclination to vomit has passed, should the patient be placed on the table, or otherwise be put in position. While this is being done, the operator has ample time to re-sterilize his hands, as the anaesthesia is now perfectly safe, and there is no necessity to hurry.

As a mask, I would, when operating with limited assistance, prefer a simple frame, covered with some impermeable material, and containing a piece of gauze or absorbent cotton inside (Juillard's mask). Only when the weather is exceedingly warm a more complicated apparatus, which regulates the evaporation, may be required. Juillard's mask has, besides others, the great advantage that the anaesthetist need simply pour the ether on the gauze, and fix the mask over the face with a towel. He is then free to assist in any other way required until the patient's respiration indicates to the operator that a further supply of ether is needed. All other masks require someone to continually hold them on the face with one, or even with both hands. On the other side, a certain amount of ether is wasted with Juillard's mask, and while it is being used one cannot rely upon the reflex of the cornea, the ether vapour striking the cornea directly, and producing local anaesthesia before general anaesthesia has set in.

The inhalation of concentrated ether vapor at the outset is to the patient more disagreeable than chloroform. It is, therefore, advisable to allow the patient one or two minutes to get accustomed to the smell, while holding the mask a few inches from the face, otherwise a fear of suffocation often sets in, and a violent struggle commences. After that one can pour the ether on freely (about one ounce and a-half at once), and can hold the mask tightly to the face. A danger of CO₂ poisoning through exclusion of the atmospheric air does not exist. Even if one takes

especial care to exclude the air with a towel as perfectly as possible, the amount of CO₂ under the mask has never been found to be more than 1.7 vol. per cent., whereas 20 per cent. is the lowest concentration fatal for mammalia. The margin for safety is thus a very large one.

A great difference between the administration of ether and chloroform results from the necessity of keeping the ether-mask on the patient's face all the time, and always to let him inhale ether vapour, though not always in concentrated form. If one should remove the ether-mask entirely, as one is accustomed to do in chloroform anaesthesia, the patient would very soon wake up, and severe coughing often sets in as soon as ether is administered again. This, I believe, is a point where many practitioners fail whenever they make a trial with ether, after having previously been accustomed to chloroform only.

That ether is not a perfect anaesthetic, and that it is not suitable in all cases, no impartial observer can deny. It has quite a number of disadvantages. The principal one is the troublesome hyper-secretion of mucus and saliva. To minimise this, one must very carefully avoid letting even the smallest quantity of ether enter mouth or nose in substance. This accident takes place oftener and more easily than many expect, as ether, especially in warm weather, when poured on the gauze, evaporates for a few seconds, in form of a fine spray, from the superficial layer of the gauze. If the patient inhales this spray, coughing and retching at once sets in, and in all probability the anaesthesia from this moment will be an unsatisfactory one. To avoid it, one should always swing the mask for a few seconds briskly through the air. The patient's head should be turned on its side, so that the saliva can flow out from the lower part of the mouth by gravitation. This position seems also useful in preventing the tongue from falling back; or, at least, I have never had any trouble with the tongue in ether-anaesthesia. A mounted sponge or pledget of absorbent cotton must always be kept handy, to remove the mucus from the throat, should this become necessary. But should one find in very rare cases that the respiratory organs, while they were previously sound, will not bear ether, the anaesthesia must be abandoned, for chloroform cannot be substituted, as fatal paralysis of the centres of respiration would be very liable to follow. On the other hand, it is always safe to substitute ether after chloroform has previously been used. If under chloroform *delirium cordis* sets in, so that one cannot proceed with the anaesthesia, ether will in a few minutes make the pulse strong and regular again.

There are a few minor disadvantages attached to the ether narcosis. It certainly takes a little more time to produce perfect anaesthesia. The stage of excitement is often somewhat prolonged, and persons accustomed to alcohol can become very violent, so that some operators from the first secure the patient's limbs through a long broad strap which fastens the thighs to the bed. Vomiting of bile and slime also seems to me more frequent than in chloroform narcosis, and I rather prefer to see free vomiting setting in, and to have done with it, before the operation commences.

Sometimes, but not often, one sees a case of ether-tremor, even after full anaesthesia has been established; and it can become so severe that operating, especially on the limbs, would be perfectly impossible. A few inhalations of chloroform, carefully administered, will completely remove the tremor. Occasionally severe coughing sets in, even if the ether has been given with the greatest care. The vapour should then be inhaled in a very concentrated form, and this is also the best remedy whenever the excitement is excessive.

The skin, during a prolonged operation, becomes highly turgescient; consequently the irradiation of heat is great, and after the operation a fall of temperature from three to four degrees is not at all rare. Warming-pans are, therefore, after ether anaesthesia, more frequently required than after chloroform.

The great danger of explosion may also be mentioned; but it only exists where the operator has forgotten this point. The concentrated ether-vapor is considerably heavier than the atmospheric air, and it falls to the ground at once. Lights and lamps above the operating table, therefore, are in no way dangerous. Some operators, who otherwise use chloroform, even prefer ether while operating with artificial light, as the chloroform vapor, when in contact with a burning flame, develops free chlorine, which greatly molests the respiratory organs of the patient as well as of the surgeons. If, however, the thermo-cautery is much to be used during the operation, it is advisable always to keep it at respectable distance from the ether mask, and even with very limited assistance the anaesthetist should never have charge of the thermo-cautery also.

The contra-indications to the administration of ether can be easily deducted. For operations on the head ether anaesthesia has hitherto been regarded as unsuitable, as the somewhat cumbersome ether-mask has to be kept on the patient's face all the time. Quite recently the proposal

has been made to etherize the patient in the usual way, until he is under the full influence of the drug; then to place the ether bottle in a vessel with hot water, to connect its mouth with a rectal tube, and to administer the vapor by way of the rectum. I have not had a chance to see this plan tried. If it works well, it should be a great help in many operations, especially in the cavity of the mouth.

In all severe affections of the respiratory organs chloroform is to be preferred, above all for little children, who usually bear chloroform so well. Tumors, which compress the trachea, are universally considered direct contra-indications; so is advanced phthisis, emphysema and severe bronchitis, whereas incipient phthisis, pleuritis or asthma are not affected adversely. In the milder forms of chronic bronchitis ether does not always cause an exaggeration. I remember especially one case when I administered the anæsthetic for Prof. Säger, of Leipzig, during the removal of a large myoma of the uterus. As the patient had suffered from chronic bronchitis for years, chloroform was the anæsthetic agreed upon. But when the peritoneum was opened, and when I saw the enormous extent of the adhesions (previous attempts at puncturing by other hands having set up an adhesive peritonitis) I at once changed the chloroform for ether, well knowing that the operation would last many hours, as the operator never on any account used to abandon an operation on a point of technical difficulties. The patient remained in deep narcosis for five hours and three quarters. The recovery was perfect, without the slightest exaggeration of the bronchitic trouble.

In spite of all the advantages of ether, one cannot deny that the chloroform anæsthesia always looks the more elegant of the two. The sleep seems deep and natural, and the patient seems perfectly at his ease—a point rather of importance should any relatives be present. In ether anæsthesia the laboured and noisy respiration, the froth protruding from mouth and nose, the cyanosis, the large beads of perspiration on the face, the dark blood of the wound (all symptoms of no *real* consequence) are not pleasant to contemplate for anyone previously accustomed to the use of chloroform. And I can readily understand that many a practitioner, who has no previous experience with ether, is inclined to abandon it again after two or three (to him) perfectly unsatisfactory trials; but as soon as he becomes familiar with the drug, he will think differently. The operating surgeon of a large public hospital, who has an experienced anæsthetist and sufficient other skilled assistance always at his disposal, may be justified in preferring chloroform, except for the special cases alluded to before. The

practitioner, however, who usually has to take the responsibility of the anæsthesia as well as the operation; who, moreover, if an accident does take place, is not covered by the broad cloak of a great hospital, and by the concurrent opinion of several fellow-practitioners who happen to be present—the isolated surgeon in the country has in ether the anæsthetic on which he should principally depend, and which will relieve him of more than half the anxiety in all operations which he has to perform without assistance. About this I have no doubt.

NOTES ON A CASE OF COCAINE POISONING.

(Read before the Ballarat Medical Association.)

By ROBERT SCOTT, M.B., CH. M., HON. SURGEON BALLARAT HOSPITAL, VIC.

THESE few notes on a case of cocaine poisoning, at which I was requested to make the *post mortem* examination, appeared to me of interest—not from any peculiar or distinctive features presented, but from the rarity of cases recorded in which death has resulted from an overdose of cocaine.

W. R., *æt.* 41, unmarried, medical practitioner, a strong, healthy man, in full possession of his faculties, and in active practice in a suburb in Melbourne. His partner stated that he was aware that on two or three occasions deceased had taken an overdose of the drug during the period he was assisting him (about 18 months). He was in the habit of going to the country every three or four months, for two or three days, and his partner believed it was to indulge in cocaine excess. Ten months previously his life was in danger from excess in this particular.

Deceased studied in England, and was a distinguished student, and came to the colony in 1890. He was known in England to Dr. Tremearne, who states that he destroyed the most brilliant prospects of success in the medical profession by the abuse of alcohol and narcotics. Evidently, then, in this case the progress had been from alcohol through morphia to cocaine. He arrived in Ballarat on the evening of Saturday, the 8th September, 1894, and put up at an hotel. He did not leave his room all Sunday, and was supplied with some light nourishment, and a waiter got 80 gr. of cocaine for him. He was found dead in bed on Monday, at 8.30 a.m. Strewn on the bed and floor were a large number of pictures and photographs, and also empty phials of cocaine and hypo. and other larger syringes.

Post mortem made on 10th, at 5 p.m. Body well nourished. P.M. staining well marked. Rigor mortis well marked. Penis remarkably small, and glairy mucus exuding from urethra, but no spermatozoa could be found under the microscope. On right side of chest and over sternum were eighteen distinct and recent punctures, also a number in right forearm. Hands clenched; elbows flexed over trunk. In left hand was a handkerchief with some blood-stains. Blood was exuding from nostrils. Pupils were somewhat dilated equally, but not fully. On dividing the skin the punctures were only superficial. On opening the chest the heart was enlarged, the walls flabby and friable, and ventricles empty, with exception of a little clotted blood in the right ventricle. Lungs both showed hypostatic congestion.

In the abdomen the liver was normal in size, deeply congested and extremely friable. The organ could not be removed from position without causing laceration.

Spleen normal in size and weight. On opening the capsule, the organ consisted of grumous-looking matter of the consistency of porridge. Kidneys congested; some small cysts present in the capsule, which was easily detached. Stomach was congested on the anterior surface, but this only extended through the superficial coats. The organ contained a small amount of partially-digested food and mucus. The mucus membrane was normal. Intestines were normal, also the pancreas. Bladder was moderately full of clear straw-coloured urine. On opening the brain, the scalp was congested. Dura mater also congested, and sinuses full of dark fluid blood. Brain deeply congested both on surface and in substance. The ventricles contained blood-stained fluid; medulla also was congested. The brain was of good development, and convolutions well marked.

These are shortly the clinical and *post mortem* notes of the case. No doubt, in this case, deceased had become habituated to the use of the drug to a great extent, but from evidence he had at least injected grs. xxx between midday on Sunday and the time of his death, early on Monday. The dose of C. is put down as 1-5th to 1 grain, but, so far as I can learn, no lethal dose is given. Evidently deceased had stimulated himself by smaller injections at first, but unfortunately overstepped the bounds, when stimulation ends, and depression begins, for death in this case was undoubtedly due to paralysis of the vagus, and probably the phrenic causing asphyxia.

Another point of interest in connection with

cocaine is the fact that so many become cocaine-maniacs after beginning with alcohol and then abusing morphia. I fancy the explanation must lie in the antagonism between the drugs, and probably in the first place cocaine is taken as a stimulant against the depression following morphia, just as morphia is taken to counteract the depressing after-effects of alcohol.

A CASE OF PLACENTA PRÆVIA, WITH ASCITIC FETUS.

(Read before the Newcastle Medical Society.)

By JOSEPH L. BEESTON, L.K.Q., C.P.I., &c.

THE following notes are those of a case which I attended about twelve months ago, and, as the conditions and surroundings are not met with very frequently, I have ventured to read them before you to-night.

The case is that of a woman aged about 36. I first attended her about ten years ago, when she had puerperal eclampsia. I delivered her then by turning under chloroform. Since then she has had three children, all of them prematurely and stillborn. Albumen has been present in the urine throughout, but under appropriate treatment she has been kept fairly comfortable.

Since becoming pregnant this time, the renal symptoms have been distinctly prominent. Persistent headache, drowsiness, anæmia, loss of vision, vomiting, and anasarca being present in a more or less degree. She continued in this state until the eighth month, when a sudden gush of hæmorrhage took place. I found her completely blanched, and almost pulseless from the loss of blood, the bedclothes being saturated. In addition to this she was very stupid, being roused with difficulty, and quickly relapsing into a partially comatose state. The os was very spongy, and admitted the finger easily. The placenta presented, the attachment apparently being central.

Two lines of treatment were now open for adoption, either to dilate without delay and bring down a leg, or to plug the vagina and allow the os to dilate naturally. Taking into consideration the extremely low state the woman was in from the loss of blood, I determined to follow the latter course, with the idea that less shock would follow than if the os were forcibly dilated. With this end in view, I detached as much of the placenta as I could reach with the finger, and securely packed the vagina with iodoform wool. After four hours I removed the plug and was able to introduce the left hand. The placenta proved to be a "central" one, so I passed the

hand straight through, and, grasping a leg, proceeded to turn. This was fairly easily accomplished as far as bringing down both legs. At this stage, however, it became apparent that some serious obstruction to delivery existed, which, on passing the hand in again, proved to be the enormously distended abdomen of the foetus.

From the appearance of the legs, I concluded that the child was dead; so, without much difficulty, I scratched through the abdomen just above Poupart's ligament, and let out between two and three pints of fluid, after which delivery was an easy matter.

The foetus was just one mass of anasarca, the face being shapeless. The abdomen when filled with water by means of a syringe exactly resembled a plate in Herman's book on "Difficult Labour," page 109. The placenta was something enormous, and completely lined the whole interior of the uterus. When placed in the ordinary-sized chamber utensil it filled it to within an inch of the top.

As may be supposed, the shock to the patient was very profound. The uræmic symptoms improved for the first twenty-four hours, but she gradually became comatose, and died on the fourth day from suppression of urine.

The case is remarkable, in the first place, as occurring in a woman affected by chronic nephritis for at least ten years, and who had puerperal eclampsia once, and was threatened with it on two subsequent occasions.

The condition of the foetus was, I take it, simply a reproduction of that of the mother, the placenta also partaking of the general œdema.

A CASE OF HABITUAL ABORTION, TREATED BY POTASSIUM CHLORATE.

(Read before the N.S. Wales Branch B.M.A.)

By W. J. BARKAS, M.R.C.S. ENG., L.R.C.P.
LOND., OF PADDINGTON, SYDNEY.

HABITUAL abortion occurs with some degree of frequency, and is always a source of danger to the health of the patient, and often also affects them mentally from the frequent disappointments. Any treatment, therefore, that has any likelihood of terminating this predisposition is worthy of a trial. There are three drugs that have been asserted by many obstetricians to have had some degree of success in such cases, viz., assafetida, viburnum prunifolium and potassium chlorate. In the *Lancet* of December, 1893, there appeared two letters strongly asserting the beneficial action of potassium chlorate. A short time after perusing these letters the following case came under my care, and enabled

me to experiment with this drug. As this is the only case in which I have been able to administer the drug, it certainly does not prove much, but it is sufficiently satisfactory to induce me to place the case before you, in order that others may adopt a treatment which certainly can do no harm to the patient, and might be successful.

Mrs. ———, aged 24, with no history of syphilis in either herself or her husband, had always enjoyed good health before her marriage, also during her first pregnancy, which resulted favourably, and afterwards up to the time of her first miscarriage. This was caused by a cab accident when about three months pregnant. No marked ill results ensued after this mishap, but she had five consecutive miscarriages in four years and a half, four of which occurred about the second and third months, and resulted in each case in the expulsion of a well-formed foetus. The third abortion occurred about the fifth month, when a fleshy mole was expelled. In all these miscarriages there was very free hæmorrhage antecedent to the abortion. During the whole of this period Mrs. ——— was intensely anxious to have another baby, and consequently took every possible precaution, whenever she became pregnant, against any contingency likely to cause any ill result. Her general health continued fairly good, but her nervous system became somewhat emotional, if not hysterical; there were no symptoms of any uterine affection, and her menstrual periods were normal. On December 30th, 1893, she again consulted me, as she was afraid of another mishap, being then two months advanced in pregnancy. I ordered rest in bed, and gave an opiate to allay the slight pains. As the pain still continued, with slight hæmorrhage, and the os not being dilated, I prescribed viburnum prunifolium. These symptoms continued for four days. On January 4th, 1894, I was sent for in a hurry, as the pains had become frequent and severe and accompanied by free hæmorrhage. On examination, I found the os very patulous, sufficiently so to allow the entry of two fingers. Under such circumstances I considered it hopeless to prevent the miscarriage. I had, however, just read Dr. Pratt's account in the *Lancet* of two cases treated by potassium chlorate, and seeing the great anxiety of my patient to continue to the full time, I spoke to her of these cases, and suggested trying the experiment, but explained frankly my belief that the attempt would fail. However, she eagerly desired to adopt the treatment, and I ordered her a mixture with potassium chlorate 10 grains three times a-day, and absolute rest and

cleanliness of uterine passage. On the following day, having taken four doses, I confess, much to my surprise, the pains had gradually disappeared, the hæmorrhage stopped, and the os was contracted to almost its normal condition. I ordered her to remain in bed for a week, and then allowed her to go about as freely as she wished, and advised her to continue taking the medicine regularly until the end of the eighth month. She followed these instructions faithfully, and on August 25th was delivered of a full-grown male child. As 278 days is the average term of pregnancy, it is evident that my patient became *enccinte* during November, 1893. In adopting this treatment, it is requisite that the urine should be tested for albumen at least once a week, and should albumen be present the potassium chlorate must be stopped, and tinct. ferri perchlor. given until all trace of albumen disappears, which is generally in three or four days. In this case the treatment had to be interrupted twice.

CASE OF SNAKEBITE TREATED WITH STRYCHNINE.

BY ERNEST HUMPHRY, M.R.C.S.E., L.R.C.P.
LOND., OF TOWNSVILLE, QUEENSLAND.

J. M., a Malay, aged about 30, was bitten by a black snake, about 4 p.m., on the third toe of left foot. He did not think much of it at the time, but went on with his work. About a quarter of an hour after, he felt very sick, and he then told his wife what had happened. She cut the toe in two places where the marks of the fangs were, and sucked it, and also gave him about half a wineglass of brandy with some water, but this he shortly after vomited. He became slowly unconscious, and I was then sent for, and arrived on the spot about 8 p.m. He was quite unconscious on my arrival, and I could not rouse him. I immediately injected 1-12th gr. of the nitrate of strychnine. Ten minutes after I repeated the dose, and in another ten minutes another dose. This time he felt the needle, and in another two minutes I was able to rouse him sufficiently to sit up in bed and answer questions, but he was not very coherent. I stayed with him till 12 p.m., and by that time had given him in all seven injections of strychnine, amounting to 7-12th of a grain; and not until the last injection, at about 11.30 p.m., did he show any poisonous symptoms. He then had some muscular contractions in his neck. He was now able to walk about with help, and tell me all about the snake, and how it had caught hold of his toe.

His wife showed me the snake. This was a black snake with a yellow throat, about three feet long. It had only four scales along the upper jaw, with, of course, the two poison-fangs inside. This is rather a brief account, but I think sufficient to demonstrate the value of strychnine in some snakebites at all events.

Townsville, Q., February 10, 1895.

MAGGOTS.

BY G. HERBERT SALTER, M.R.C.S., &C.,
BALLAN, VICTORIA.

I NOTICED in the last issue of the *Gazette*, in a paper read by Dr. M'Adam, mention of a case of conjunctivitis due to maggots. No doubt, such cases are extremely rare, and for that reason I am led to contribute the following:—

One morning in December, 1893, I was consulted by Mrs. S. She was by occupation a charwoman, her rich brogue clearly indicating her nationality.

I knew her to be the victim of alcoholic intemperance. She admitted having had a "drop" during the few days preceding. She complained of pain in the left eye, and a feeling as though little pebbles were rolling over the eyeball. This, to use her own language, she considered due to a "slight touch of the blight." On examination, her left eye was red and very much swollen, the lids more or less glued together with pus and blood. These, with gentle traction, were easily separated, when the most disgusting state of things presented. The space between the lower eyelid and the globe was considerably pouched and teeming with maggots. I made some attempt to count them, and found between TWENTY and THIRTY, which, from their size, I judged to be two or three days old.

After cleansing the eye by gently syringing with weak warm boric lotion, I found the conjunctiva much congested, with here and there patches of ulceration. The cornea was cloudy and ulcerated at two or three spots. Under treatment the inflammation subsided during the following six days. Two months later the opacity of cornea was so extensive as to very materially impair function.

A few weeks ago I was called to see another old woman suffering from epithelioma in left temporal region. Her husband informed me "she had managed to get blown." On arrival, I found this to be the case, and removed with much trouble a large number of full-grown maggots. They had been there sufficiently long to almost demolish the growth, as well as the left lower eyelid, and find their way into the left orbit. A

few years since, at Gisborne, I was asked to see a child with discharge from the nose. On dilating the nostrils, the tails of a number of full-sized maggots were visible. A considerable number were removed by syringing, but the child, aged seven months, the subject of hereditary syphilis, died within two days from convulsions. On another occasion I found the presence of two maggots account for a discharge from a child's navel. At any rate, the discharge cleared up two or three days after their removal.

MIRROR OF HOSPITAL PRACTICE.

DIPHTHERIA ANTI-TOXIN AT THE SYDNEY CHILDREN'S HOSPITAL.

THE following six cases of diphtheria treated by anti-toxin at the Children's Hospital (Diphtheria Branch), under the charge of Dr. Clubbe, are reported by Dr. Litchfield, House-Surgeon:—

1. G. R., girl, age six years, admitted 8th February, 1895. Died 13th February, 1895; said to be ill eight days; nutrition fair, child somewhat prostrated, temp. 100., tongue furred, pulse 132 soft, respirations 38, slight croup, no dyspnoea, urine acid, 1020, contained albumen, no nerve symptoms. *Local condition*, breath offensive, tonsils, uvula and soft palate covered with membrane, considerable swelling of glands in neck, with brawny infiltration of subcutaneous tissues of neck, Anti-toxin (Behring's) 10 c.c. injected at 10.30 p.m. under skin of chest. 9th.—12.30 p.m. Swelling in neck subsiding, membrane in throat curling up at the edges, small pieces coming away on swabbing the throat. Retains nothing by mouth, fed by nutrient enemata; temp. 100., pulse 120, weak; resp. 32, croup more decided, slight laryngeal obstruction, injection of anti-toxin 10 c.c. repeated. 10th.—12.30 a.m. Laryngeal obstruction more marked; tracheotomy performed; vomiting ceased. 11th.—Swelling much reduced, throat clearer, a lot of membrane having come away, palate paralysis has developed, pulse slower and weaker, 110; resp. 32, temp. 100. 12th.—Pulse slower and weaker, the local condition shows an improvement all round. 13th.—Pulse has become progressively slower and weaker, being 42 for some hours before death. Strychnine, sal volatile, and Brown-Sequard's testiculaire were injected without avail. Died at 10.30 p.m. The albumen in the urine and the paralysis persisted to the end.

2. A. H., aged 4 years 10 months, admitted 29th January, 1895, discharged 24th February, 1895; said to be ill five days; nutrition good, temp. 98.6, tongue furred, pulse 138, resp. 28, dyspnoea, croup. Stridor and recession with cyanosis; urine contained albumen. *Local*: tonsils

and pharynx covered with membrane, considerable laryngeal obstruction; tracheotomy was performed at once. 1st Feb., temp 100, pulse 128, resp. 60, cough dry and whistling, considerable dyspnoea and cyanosis. Anti-toxin (Behring's) 10 c.c. injected under skin of breast. 2nd.—Slight improvement, anti-toxin injection repeated. 3rd.—Much more comfortable, temp. normal, resp. 52, pulse 128, throat clearer. 6th.—Tubes left out, throat quite clear, temp. normal, resp. 28, pulse 108. On the 8th, he developed palate paralysis; this lasted nine days; pulse during convalescence was weak at times. At time of discharge he still had some albumen in his urine, and the Klebs-Loeffler bacilli had disappeared from the throat.

3. J. H., aged six years, admitted 9th February, 1895, discharged 16th February, 1895; said to be ill two days; sister died of diphtheria to-day; nutrition good, temp. 99.4, tongue clean, pulse 118, resp. 20, croup, dyspnoea, stridor and recession, no albumen, no nerve symptoms. *Local*: Tonsils red, no membrane laryngeal obstruction. Anti-toxin (Behring's) 10 c.c. injected at once. This child rapidly improved. In four days the croup had quite gone and the temp. was normal. Never developed albumen. Convalescence was uneventful.

4. A. P., girl, seven years, admitted February 9th, 1895; said to be ill nine days; nutrition poor, temp. 100, tongue furred, pulse 134, resp. 30, croup dyspnoea, stridor and recession, urine contains a trace of albumen, no nerve symptoms. *Local*: small patches of membrane on both tonsils, laryngeal obstruction. Tracheotomy was performed immediately, and 10 c.c. anti-toxin (Behring's) was injected.

10th: Child fairly comfortable, membrane has been coughed up from trachea, and obtained from larynx through the tracheotomy wound.

11th: Silver tube replaced by a rubber one. Has developed palate paralysis, temp. normal. Next day the rubber tube was left out. In two days more the throat was clear of membrane; the palate paralysis lasted eighteen days. The urine contained a trace of albumen during that time. During convalescence the pulse was very weak (72 to 100 per minute) for some time. At present the child is still in bed, but is picking up rapidly.

5. A. R., girl, four years, admitted February 19th, 1895, said to be ill five days; nutrition good, temp. 100°, tongue furred, pulse 128, resp. 20, quiet, urine no albumen, no nerve symptoms. *Local*: membrane on both tonsils, muco purulent discharge from nostrils, slight enlargement of the glands in neck.

22nd, 2 p.m.: Child is a bad colour, restless, temp. 100°, pulse 136, resp. 20, quiet, urine large.

deposit of albumen, numerous epithelial and granular casts. *Local*: membrane has spread on to uvula and soft palate, membrane seen in the nostrils, the glandular swelling has increased, and slight brawny infiltration of the subcutaneous tissues of neck has developed; 5 cc. anti-toxin (Aronsen's) injected. 11.15 p.m.: condition much the same, injection repeated.

23rd: Colour better, temp. 99°, pulse 136, soft resp. 24, quiet, urine same, swelling reduced, brawniness has gone. The membrane tends to come away. From this date steady improvement took place. In three days the nasal discharge ceased. In two days more the throat was clear, the glands much reduced in size, and the temperature was normal. At present is very well, still has much albumen in her urine.

6. E. Y., girl, 8½, admitted February 20th, 1895, said to be ill five days, nutrition fair, temp. 100°, pulse 106, soft, resp. 24, quiet, urine trace of albumen, no casts, no nerve symptoms. *Local*: tonsils, palate and uvula covered with membrane, breath foul, enlarged glands in neck.

21st, 6 p.m.: condition same, anti-toxin 10 c.c. (Aronsen's) injected.

22nd, 6 p.m.: Temp. normal, pulse 90°, good, resp. 18, urine same. The membrane from the throat has almost gone, breath not so foul, glands in neck greatly reduced in size. Two days later all the local signs had disappeared, convalescence has been uneventful. The child is still in hospital and is very well.

Remarks.—The reason why the injection was not made at once in cases 2, 5, and 6, was that we did not have the anti-toxin at the time. In each case the Klebs-Loeffler bacillus was demonstrated by a serum culture from a throat swab. Additional treatment in each case was employed as follows:—A throat swab, liq. sodæ chlor. 1 in 2 every 9 hours. An iron mixture, brandy and strychnine as indicated. And extra for tracheotomy cases, steam calomel burnt in the tent every eight hours. A tracheal spray and trypsin. The injections were made under the skin of the breast and by a Pravaz syringe.

SICK CHILDREN'S HOSPITAL CASES TABULATED.

Case.	Age.	Antitoxin used.	Day of disease when injected.	Needed Operation.	Condition before Injection.	Post-diphtheritic Conditions.	Result.	Cause of Death.
1	6	Behring's No. 1, 10 cc. and repeated.	8 & 9th	Tracheotomy.	Very serious.	Palate paralysis, and heart failure.	Died.	Heart failure (post-diphtheritic).
2	4½	Behring's No. 1, 10 cc. and repeated.	8 & 9th	Tracheotomy.	Very serious.	Palate paralysis.	Cured.	—
3	6	Behring's No. 1, 10 cc.	2nd	No.	Not serious.	Nil.	„	—
4	7	Behring's No. 1, 10 cc.	9th	Tracheotomy.	Serious.	Palate paralysis, and cardiac asthenia.	„	—
5	4	Aronson's 5 cc. and repeated.	8th	No.	Very serious.	Nil.	„	—
6	8½	Aronson's 10 cc.	6th	No.	Serious.	Nil.	„	—

This list will be continued in subsequent issues.

FRACTURE OF ANTERIOR SUPERIOR ILIAC SPINE BY MUSCULAR VIOLENCE.

By CYRIL ERNEST CORLETTE, M.B., CH.M.,
SYDNEY, SENIOR RESIDENT MEDICAL
OFFICER, SYDNEY HOSPITAL.

S. D., aged seventeen years and eight months. Admitted August 24th, discharged September 24th, 1894. Patient was getting down from the top of a 'bus, behind, when the 'bus suddenly went forward, causing him to slip and lose his footing. He came down with his whole weight on the right foot, and immediately felt a pain in the region of

the anterior superior iliac spine. He fell forward and could not rise. On being assisted up, he could stand on the left leg, but could bear very little weight on the right, the attempt causing pain. When examined and made to stand, he stood bent forward, with the right hip and knee partly flexed, the toes touching the ground, and turned slightly inward. On lying down, passive movement of the hip and knee could be done freely without causing pain, so long as the hip was not extended beyond a certain point. On comparing the two sides, there was an evident loss of prominence over the situation of the right anterior superior iliac spine, where the patient complained of pain. Manipulation caused great

pain; closely localised and distinct crepitus was obtained at the spot complained of. There was no pain nor tenderness anywhere else. The patient was admitted to the accident ward under Dr. Goode. He was treated by fixing a high pillow beneath the knee, thus flexing the hip. A considerable amount of callus subsequently formed.

I record this case on account of the rarity of the injury, cases being very seldom reported. It was evidently caused by a sudden contraction of the Sartorius muscle.

NOTES AND OBSERVATIONS ON INTERESTING CASES TREATED IN THE ECHUCA (VIC.) HOSPITAL.

By WALTER FOWLER, M.A., M.B., B.C. CAMB.,
F.R.C.S. ENG., ECHUCA, VICTORIA.

(A.) LIGATURE OF THE ANTERIOR TIBIAL ARTERY IN ITS UPPER THIRD.

A. B., aged 19, admitted 1st December, 1892, under the care of Dr. Eakins, who has kindly given me permission to publish the case. This patient was the subject of a well-marked aneurism of the anterior tibial. The aneurism was the result of a stab self-inflicted three months previously while the patient was skinning a sheep. It was situated one and a half inch below the head of the right fibula, was somewhat pyramidal in shape, apparently about the size of a tangerine orange and evidently on the eve of bursting.

Dr. Eakins asked me to operate for him. The man being under chloroform and Esmarch's bandage applied, I made the usual incision, which began on a level with the lower part of the head of the fibula, and passed internally to the prominent part of the aneurism. After separating the Extensor longus digitorum and the Tibialis Anticus muscles the aneurism (which extended behind the extensor longus digitorum) was exposed and opened as deep down as possible. A little unorganised clot was turned out, and at the bottom of the sac were seen four small orifices belonging respectively to the partially severed distal and proximal ends of the anterior tibial artery and its outer vena comes. In order to dissect out the artery and vein I found it necessary to divide transversely the deep fascia at its attachment to the heads of the bones. Artery and vein were tied together above and below with silk. Deep catgut sutures were used to unite the divided edges of deep fascia; the skin incision united with silver wire and the leg dressed with carbolic gauze and placed on a back

splint with foot piece. All went well and the patient was discharged to his work in about three weeks; and now—two years after operation—is still without discomfort of any kind.

(B.) LIGATURE OF THE RADIAL ARTERY AT THE BACK OF THE WRIST.—(*Tabatière Anatomique.*)

This case is not strictly and anatomically a wound of the deep palmar arch, but is recorded to exemplify a curious clinical fact, namely,—that hæmorrhage from the palmar arches is very prone to occur at night. I have never heard any explanation of this, nor am I able to give a solution.

An old man with somewhat rigid arteries, on the morning of the 10th Jan., 1894, while chopping wood with a "tomahawk" accidentally inflicted on himself an incised wound at the back of the first interosseous space of his left hand. The bleeding, which had been profuse, had ceased when I saw him; nevertheless all the rigid observances that one makes when dealing with a case of palmar hæmorrhage were made use of. Hæmorrhage recurred the same night; on the 8th; on the 16th, and again on the 18th, and on each occasion after he had retired to bed. The bleeding was very profuse so as to induce both faintness and vomiting. During the intervals the compresses, splint and bandages were never interfered with. After the last attack of hæmorrhage I took him into the hospital and tied the partially severed radial artery above and below its wound at the back of the wrist in the "*tabatière anatomique*." The operation was entirely successful.

ABSTRACTS.

SHORT EXTRACTS FROM FOREIGN CURRENT MEDICAL LITERATURE.

By C. A. ALTMANN, M.B., F.R.C.S.E., OF PORT LINCOLN, SOUTH AUSTRALIA.

A CASE OF CORTICAL EPILEPSY CURED BY TREPHINING.

Leyden (*Berliner Klinische Wochenschrift*, '94, No. 37) reports the case of a man, *at.* 30, who, having suffered from fracture of the right side of the skull when four years old, was suddenly attacked with left-sided convulsions in June, 1892. The fits since then recurred constantly. Towards the end of February, 1894, the patient suddenly began to suffer from violent right-sided headache, accompanied by a feeling of numbness and weakness of the left arm and leg. He was brought into the hospital in a somnolent condition, and with a completely developed left-sided paralysis. Fundus oculi, normal. As the somnolence was increasing, and a depression of the right parietal, near the sagittal suture, of about the size of a shilling, being discovered, trephining was performed; but only a thickening of the connective tissue between the bone and dura mater

was found, so that a good result was not expected. However, after eight days, the somnolence diminished, and a week later there was active movement of the left arm and leg. Three months after the operation all symptoms had disappeared, with the exception of a slight dragging of the left leg. The site of the bony depression was over the leg centre. The most noteworthy features of this case are, that the fits did not occur until twenty-four years after the injury; and that, in spite of the slight anatomical alteration, the clinical symptoms were so severe and disappeared so promptly after operation.

A CASE OF TUBERCULAR MENINGITIS TERMINATING IN RECOVERY.

Freyhan (*Deutsche Med. Wochenschrift*, 1894. No. 36), reports a case of tubercular meningitis, in which the diagnosis was established by an examination of the cerebro-spinal fluid. The spinal chord was punctured at the level of the second lumbar vertebra, and 60 c.ms. of a slightly opaque light-colored serous fluid were withdrawn. The sediment of this fluid showed under the microscope a few pus cells, as well as undoubted tubercle bacilli, whose presence was further confirmed by numerous control experiments. After the puncture, the patient made a rapid and continuous recovery, so that at the end of three weeks he was able to leave his bed for the first time. Lumbar puncture, therefore, independent of its therapeutic value, offers a most valuable means of differentiating between tubercular and cerebro-spinal meningitis.

THE DIETETIC TREATMENT OF CHRONIC HEART DISEASE.

Glax (*Internat. Klin. Rundschau VIII. Jahrg.*, No. 40), from the experience of a long practice, concludes as follows:—1. The limitation of the ingestion of fluids is one of the most important measures in the treatment of chronic heart disease, and is alone often sufficient to bring about compensation. 2. In many cases the efficacy of failing drugs becomes re-established as soon as the consumption of fluids is regulated.

MYOSOTIS PROGRESSIVA OSSIFICANS.

At the Berliner Medicinische Gesellschaft (*Berl. Klin. Wochenschrift*, '94, No. 32), Prof. Virchow exhibited a case of the above rare disease. The patient was twenty-nine years of age; no hereditary history. The disease began acutely about ten years ago in the right jaw and shoulder. Treatment had no effect whatever. The process of ossification began comparatively suddenly in spots, which were very tender and somewhat swollen. The growths took place between the months of April and June, and were in the first year confined mostly to the right side. At present there is scarcely a part of the body which does not show traces of the disease. The lower jaw is immovable, and the patient can only take liquid food poured in through an opening obtained by the removal of two front teeth. With the exception of the jaw, the face is comparatively free. Prof. Virchow remarked that these changes were not due to a primary affection of the muscles, but that they had their origin in the bone, processes of which grew into the muscles. He classifies the disease under the heading of "Exostosis Luxurians."

STEAM.—A NEW HÆMOSTATIC.

Prof. Snegirjoff, of Moscow (*Centralblatt f. Gynecologie*, '95, No. 8), at the Moscow University Clinic, showing the value of steam as a hæmostatic. He has a special apparatus constructed for applying the steam. In the first instance he experimented on animals, and found that:—1. Pieces of liver could be extirpated

without any loss of blood; the animals survived. Similarly he removed pieces of spleen, lung, kidney, brain. 2. The bleeding from the spongy parts of bones could be checked. 3. In the dog a horn of the uterus could be removed without loss of blood. 4. The femoral artery slit up longitudinally or cut transversely does not bleed when treated with steam. 5. Hæmorrhage from muscles or skin wounds ceases immediately. 6. Steam does not prevent primary union.

On the strength of the above experiments Snegirjoff used steam successfully in the following operations:—1. In five cases of resection of the knee-joint, where he used neither tourniquet, nor forceps, nor ligature. 2. Excision of a carcinomatous breast, in which not a single ligature was used. 3. In the extirpation of cancerous lipomatus, &c., neoplasms of the skin. 4. In amputation colli uteri. 5. In the removal of fibroids. 6. In the laying open of abscesses. 7. In hæmorrhages from sinous and fistulous passages.

Snegirjoff declares steam to be a most powerful hæmostatic and antiseptic. Healthy as well as diseased tissues bear steaming well. Primary union is not interfered with; the wounds of parenchymatous organs appear smooth, even, and shining. He suggests that steam would be especially valuable in checking the hæmorrhage when operating in extra-uterine pregnancy, in Cæsarean section, in bleeding from injuries received during parturition, in symphyseotomy, in rupture of the uterus, in all operations for cancer.

A CASE OF MYXŒDEMA FROM AN UNUSUAL CAUSE.

R. Köhler describes the following case (*Berliner Klin. Wochenschrift*, '94, No. 41). The patient, who showed unequivocal symptoms of myxœdema—swelling of the face, arms, and legs, great dryness of the skin, hebétude—had a partly ulcerated swelling of about the size of the palm of the hand, in front of the neck, between the cricoid cartilage and sternal notch. Incisions into fluctuating points gave vent to pus, which contained actinomycetes. On further examination the whole of the anterior half of the thyroid was found involved. The degenerated parts were scooped out. When the wounds began to heal the symptoms of the myxœdema also began to disappear by degrees; the swelling disappeared, the mental condition improved, memory returned, &c., so that a specific treatment with thyroid extract became unnecessary. As the teeth were sound, this seems to have been a case of primary skin-actinomycosis.

A CONTRIBUTION TO THE STUDY AND CURE OF ATHETOSIS.

C. Barlaro describes three cases of athetosis (*Archivio ital. di clinica med.*, '94, July.) The first was a case of hemiathetosis combined with hemiparesis of the left side. This he attributes to a small tubercle situated in the posterior part of the posterior third of the right internal capsule. In the third case there was incomplete athetosis and paresis of the right side, also due to a central lesion. Pathological, anatomical, and experimental studies have so far not helped to demonstrate the seat of the cause of athetosis. The author looks upon it as the expression of a cortical irritation. The contemporaneous increase of the muscle clonus is due to an irritation of the pyramidal fibres, which is reflected on to the anterior cornua. As treatment Barlaro recommends the galvanic current and gradually increased doses of hyoscine, beginning with one-tenth to three-tenths mlg. The latter each time caused the athetotic movements to disappear for five or six hours.

Port Lincoln, February 27th, 1895.

PROCEEDINGS OF BRANCHES.

SPECIAL NOTICE.

The Australasian Medical Gazette is supplied to all Members of the N. S. Wales, South Australian, and Victorian Branches Free of Cost. After the delivery of the March Issue, however, no member whose subscription to his branch for the current year remains unpaid shall be supplied with any further copies of the Gazette until the said subscription shall have been paid. The respective councils do not hold themselves responsible for the supply of back numbers which under this rule may have been undelivered.

Subscriptions should be forwarded to the respective branch treasurers as below—

New South Wales, Dr. Clubbe, Macquarie Street, Sydney; South Australia, Dr. T. W. Corbin, King William-st., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE monthly meeting was held at the Adelaide Hospital, February 28th, 1895. Present:—Dr. T. K. Hamilton (in chair), Drs. Clindening, Teichmann, London, Todd, Cleland, Fischer, Gunson, Yeatman, Poulton, Singleton, Hayward, A. A. Hamilton, Corbin, Sweetapple, W. A. Verco, Hone, C. Magarey, Ewbank, Stewart, Irwin, Goode, Cudmore. Hon. Sec., H. Swift.

Dr. POULTON showed two patients upon whom he had operated for Hydrocele of neck.

Dr. T. K. HAMILTON showed a sarcoma of ciliary region with microscopical section.

Dr. T. K. HAMILTON exhibited a *Carcinoma of the Thyroid Gland*.

E. P., aged 56, came for advice about his throat on Dec. 4th of last year. He complained of hoarseness, troublesome cough, which prevented him sleeping, some dyspnoea, especially on lying down, and dysphagia. On examination, partial adductor paralysis of the left cord was the only thing to be seen wrong. He gradually got worse, and died on Feb. 7th, but prior to his death laryngoscopic examination revealed incomplete bilateral adductor paralysis. Dr. P. Bollen, with whom I saw the patient in consultation, made the *post-mortem* examination, and has kindly furnished me with the following notes.

"I found, on opening the skin in the central line from the pomum Adami to the ensiform cartilage, lying in the position of the left sterno-thyroid muscle, a nodular swelling, which I proceeded to trace, with the result of removing a large neoplasm which seemed to involve the whole of the left lobe of the thyroid gland, and to pass down and somewhat force downward the division of the innominate artery (and to the right side) from the arch of the aorta. The ascending part of the arch was dilated so as to constitute an aneurysmal condition. There was difficulty in clearing the trachea from the mass. It was not involved, but simply pressed to the right. The mass of the growth had an extension more posterior to the trachea, being there as large as three or four fair-sized walnuts. Only a slight portion overlapped it anteriorly. The lumen of the trachea was partially diminished. The growth did not seem to have involved other tissues, but simply to have displaced them. It is hard—as large as my closed fist—

and would lie in from the level of the thyroid isthmus to the arch of the aorta. I also took a look at the apices of both lungs, and found that there was in both a small patch hardened and sclerosed, but not calcified. This I took to be evidence of an old phthisical condition healed. There also had been a right-sided pleurisy, with adhesions." Microscopical examination showed the growth to be a carcinoma, with remains of glandular tissue here and there scattered through it.

One point of very considerable interest in the case is, the *paralysis of the larynx* which existed in the earlier stage of the disease, when the pressure was more directly exercised on the left recurrent, the adductor of this side was alone involved; but later on, when the pressure seems to have become equally distributed over both recurrent, it gave place to bilateral adductor paralysis. This is our usual experience in these cases, that the adductor filaments are more often pressed on than those going to the adductors. The reason of this is not at all obvious. Mackenzie suggests that it may be because the adductor filaments are more superficially situated than the adductors or that the adductors receive an increase of force from the superior laryngeal nerve; but more recent investigations go to show that both adductors and adductors receive some supply from this latter nerve, so that it may be a difference in amount of force supplied. Whatever the cause may be, we invariably find that pressure on the recurrent nerve is not complete, and is more apt to affect the adductor than the adductor filaments, and this case is one in point.

Dr. POULTON showed a tumour of prostatic tissue character he had removed from bladder.

Dr. W. W. EWANK showed the following cases:—Mr. P., *æt.* 52, came into my consulting-room on November 15, suffering from retention of urine. I found that he had a very severe stricture, so sent him on to the private hospital for treatment. When he had been there a week, and everything going well, the nurses noticed that he began to drop things with his right hand. The right arm then gradually became paralysed, then the right leg. He then became aphasic, and in ten days from the commencing weakness in the right arm, the man had complete right hemiplegia with aphasia. He then rapidly got worse, and one day (December 1, 1894) he had, without any warnings, about ten epileptic fits. On December 5th, all fits having ceased, the patient had arrived at a state of coma, which on the evening of that day became so profound that I decided to trephine him at once. I did so, over the region indicated by the above symptoms. After opening the dura I found two small abscesses about as big as split peas on the surface of the cortex. These I cut away, with a good deal of brain tissue, which bulged. I passed a trocar and canula in several different directions, scarcely expecting to find anything, and found nothing. My trephine was 1½ inches in diameter. The patient made an uninterrupted recovery. I never saw power return so quickly to a hemiplegic limb before. A month after the operation the man walked a mile; and now, as you see him three months after, there is very little difference in the two sides. The grip of the right hand is powerful, and nearly equals that of the left.

The next is a case, Mr. B., who three months ago sent for me. He had been one month in bed with right sciatica. I treated him medicinally for a fortnight, at his wish, and then, as he didn't get any better, I fired him with the actual cautery, just in the same way and just as severely as they fire horses. I have done about twelve of these cases, and the results have always been complete and immediate cure. Of course it's only a little over two months since this man was done, but I

can assure him that he will get no recurrence on that side. The raw surface produced measured two feet by six inches, and the whole thing was quite healed in a month. The man has never suffered the slightest pain since he woke up from the ether. I can quote from about seventy of these cases—about sixty having been done by a friend—all equally satisfactory.

Dr. CLINDENING proposed, and Dr. TODD seconded,—"That the minutes be taken as read."—Carried.

Drs. Cecil Corbin and C. A. Harrison were elected members of the branch.

By consent of Dr. Todd, who had proposed adjournment at last meeting, Dr. Yeatman read his paper. Dr. Todd resumed discussion, followed by Drs. Singleton, Ewbank, Clindening, Corbin, A. A. Hamilton, London, and hon. sec. spoke, and Drs. Teichelmann and Yeatman replied. The President summed up.

DISCUSSION ON THE ADMINISTRATION OF CHLOROFORM.

Dr. CORBIN recalled to the memory of the older members present, the shock caused to the public mind by the catastrophe which occurred twelve or fourteen years ago, when, in two successive weeks, a death occurred under chloroform at the Adelaide Hospital. He had viewed with concern the relaxing of the public feeling against the routine use of chloroform as an anæsthetic in the last few years, during which there had been an influx of medical practitioners brought up in the Edinburgh school. He thought it was the duty of the profession to educate the public on these points, and to insist upon the danger of the routine use of chloroform as taught by statistics all over the world. He did not think there was any force in the argument that Dr. So-and-So had given chloroform so many times without a death, because someone else might have had two or three deaths in the same number of administrations; but the general average of mortality should be the guide, and that was shown by the weekly reports in the *British Medical Journal* of fatal cases in England and Europe to be far higher in the case of chloroform than when ether was used. Referring to the administration of chloroform by unqualified persons, such as clinical clerks, as mentioned by previous speakers, he re-called that twenty-six years ago, when there was only one House Surgeon at the Adelaide Hospital, whose duty was to assist the Colonial Surgeon in operations, chloroform was always given by the dispenser, and no fatalities occurred; and comparing this with the fact that the majority of deaths happened when the chloroform was given by skilled anæsthetists, argued that it was the drug, and not the administrator of it, that was in fault. While allowing that there were numerous cases in which chloroform should be the anæsthetic employed *by choice, for reasons*, he could not too strongly express the opinion that ether should be the only *routine* anæsthetic used. In the case of children, he thought partial insensibility might be induced by chloroform, but that the operation should be performed under complete anæsthesia induced by ether. He thought in some cases there might be an idiosyncrasy which made ether obnoxious to the nervous system of some persons, and in these, of course, some other anæsthetic must be given. He approved of the A.C.E. mixture for children for short operations, and in midwifery practice, and considered it had an advantage over both the anæsthetics, in that it caused less after-sickness.

Dr. W. W. EWANK said: About three weeks ago I was asked to give a girl, about twenty, ether, to have two or three teeth out. I remarked to her mother beforehand that she was a little run down, but she com-

plained of nothing. I commenced the ether with a Clover, and although I always make a point of giving plenty of air with it, when I reached 2 the girl broke out in a profuse sweat, and became cold and collapsed. She soon came round, and the teeth were extracted and a little brandy administered. I left her apparently all right. That night her mother sent for me, and the girl had marked bronchial spasm all over the back and front. This had all cleared up next morning, but on the next day her temperature went up. She developed pneumonia, and died on the sixth day, the other lung becoming cedematous. What, if any, the relation of the ether to the pneumonia had, I can't say, but this marked bronchial spasm—exactly what one hears in a chest during a mild attack of asthma—coming on after the ether, and lasting twenty-four hours, forms a sort of link in the chain. With regard to chloroform, I have used it for the last eight or ten years, at one time every day, and during that time I have never had it cause me an anxious moment with the human being. With regard to the way in which chloroform kills, I can't agree that the results of the Hyderabad Commission are of any use whatever, although Lauder Brunton is one of my old teachers, and as astute a man as ever lived. I have given chloroform to four dogs, two cats, two horses, and one cow. I lost all the dogs, both cats, and very nearly both horses; but they recovered, although we had to do artificial respiration on one of them for a long time. The cow also recovered. This, I think, proves that the effects are not the same on the dog, for instance, as on the human being. I used the greatest precautions with the dogs, as they were all valuable. The respiration certainly ceased before the heart in the dogs, but I think it's the reverse in the human being. I think these discussions very likely indirectly cause deaths. Men get frightened of chloroform, and consequently use too little. The patient is not properly under, the reflexes are not abolished, and the first cut stops the heart. I know one man who, when he hears of a fatality, for some time afterwards cannot be persuaded to use enough.

Dr. T. K. HAMILTON said: We have come to the end of an extremely interesting discussion, and I am sorry our President is not here this evening to close it. I think Drs. Teichelmann and Yeatman are well deserving of the sympathy which has been shown to them during the discussion. We feel for them all the more because a similar accident might happen to any of us at any time. The discussion has assumed, for the most part, a chloroform v. ether character, and from the expressions of opinion on each side it is evident that the choice is still largely a matter of individual preference. Drs. Verco and Hayward have referred to carelessness in the administration of anæsthetics. Let us hope that one result of the placing of these two casualties on record will be to lead us all, whatever anæsthetic we use, to exercise every care and take all proper precautions in its administration. (I need scarcely say this does not in any way mean any reflection on the two gentlemen concerned, as we are all satisfied that they have done everything by way of preventing accident which our present knowledge of anæsthetics and their administration tells us ought to be done.) The question of the choice of an anæsthetic for such operations on the throat as the removal of post-nasal adenoid growths is one which during the past eighteen months has been the subject of some controversy in the columns of the *British Medical Journal*. The surgeons of the Central Throat Hospital, London, have been using nitrous oxide almost entirely for these operations—both the single operation and that combined with tonsillotomy—and they

claim that for safety and efficacy it is much to be preferred to chloroform. Since these surgeons have recorded their experience, I have used gas in all these operations, and find it extremely satisfactory. The anæsthesia is quite prolonged enough to allow of tonsillectomy (double), and the removal of growths to be painlessly and thoroughly performed, and the element of danger from the anæsthetic administration is, at the same time, practically eliminated, for death from nitrous oxide is the rarest possible occurrence. These communications from the Central Throat Hospital led to a discussion on the subject before the Laryngological Society, London, at their August meeting last year. A considerable difference of opinion seemed to exist, chloroform still being most advocated as the anæsthetic to use, and the supporters of nitrous oxide objecting to it on account of its greater danger to life. Those who advocated the use of chloroform insisted on the importance of administering it slowly, and also of not giving it to complete anæsthesia, *i.e.*, to obliterate the corneal but not the cough reflex. The latter practice was endorsed by the President, Dr. Felix Simon, who is now so well known, not only as a laryngologist, but also as a physiologist. I refer to this question of incomplete anæsthesia as it seems at variance with the practice so strongly advocated by Dr. Teichmann in his paper, when he recommends that complete anæsthesia should always be induced before commencing the operation, as one of the most important things, in order to secure the prevention of reflex inhibition of the heart from pain. I do not profess to be able to decide the point at issue, but I am disposed to think that incomplete anæsthesia is desirable in throat operations, if in any. Therefore, supported by so able an authority as Dr. Simon, and feeling, as I always do, more comfortable in operating when the patient can still cough up fluid from the larynx, I am inclined, when chloroform is being used, to risk the reflex inhibition, and, continuing my present practice, to aim at incomplete, in preference to complete, anæsthesia in these operations. One other point in connection with the removal of post-nasal adenoids under anæsthesia, and this is a practical one, worthy of attention. When the nasopharynx is almost blocked, as it often is, with the growths, the child is frequently unable to breathe except through the mouth, and when the head is in the usual hanging position for the operation this difficulty is still further increased. If, under these circumstances, the child show signs of chloroform-poisoning, it is manifestly not the correct thing to extend the neck, which means closing the mouth, and cutting off all air supply, at the same time leaving the heavy chloroform vapor undiluted at the back of the pharynx; but the first thing to do is to open the mouth, and if that be not enough, pull out the tongue and keep it out. It is recommended in these cases to insert the gag prior to the anæsthetic administration by way of preventing the occurrence referred to.

Dr. SWIFT pointed out that another explanation might be given for the symptoms described in Dr. Ewbank's case, besides that suggested by Dr. A. A. Hamilton. The pneumonia might have been, and probably was, caused by the indrawing of blood. He considered that the wholesale extraction of teeth under an anæsthetic was a much more serious operation than it was popularly held, the chief danger lying in the drawing in of blood into the lungs, and so setting up pneumonia, this accident being especially liable to occur when a second dose of anæsthetic had to be administered. Dr. Todd had said that he did not remember a single death that could be traced to the administration of ether, but he would recall to his mind a lady

who had died of septic pneumonia some short time after he had administered ether for the extraction of teeth, which was probably due to the cause mentioned above. He thought, if dentists would operate with the head of the patient hanging, there would be much less risk of the blood running down and being sucked into the bronchi. Dr. Swift had formerly been in the habit of giving chloroform in the majority of cases, especially when resident at the Great Ormond-street Children's Hospital, where it was almost exclusively used; but after arriving in this colony, almost the first case to whom he administered chloroform became very collapsed and nearly died. This case caused him great anxiety, and since then he has never felt comfortable when giving this drug, whereas with ether he feels comparatively safe. At the Children's Hospital, the custom is to give a few whiffs of chloroform at first, and then complete the anæsthesia with ether, the children, even the youngest, taking it well. In any prolonged operation, he thought they would all agree that ether was preferable. At the same time, there appeared to be a tendency to operate too slowly, so that the patient was kept under the anæsthetic for an unnecessary length of time, which of itself was a source of increased danger. Dr. Pickering Pick had amputated through the hip-joint in some thirty odd seconds; at the present time it would take nearer an hour than a minute in the hands of some surgeons.

Dr. C. K. TODD said: The record of two cases, with the discussion which followed, have brought very clearly before our minds the fact that there is at present no anæsthetic which is absolutely safe. It would seem that ether, as well as chloroform, becomes dangerous under certain, as yet unknown, circumstances. I think every surgeon will admit that ether is a far safer anæsthetic at the time of administration than chloroform. The advocates of the latter drug assert, however, that ether kills some days afterwards by bringing on acute bronchitis or pneumonia. This is stated on good authority, but in the many cases of ether administration which I have seen, no case of the kind has ever happened. I never remember having seen any really bad effects from ether, either at the time it was given or afterwards. I once lost a case a fortnight after a dental operation, but the pneumonia (of which the woman died) was basic and double, and I regarded it as due to the inspiration of blood. This case cannot, therefore, be rightly put down as a death from ether. Then, again, ether can be given by an inexperienced person more safely than chloroform. The noisy breathing, which is so grateful to the surgeon to hear, tells at once that all is right. In fact, by listening to the breathing alone and without looking at the patient, one can tell what directions to give to the nurse who is administering this anæsthetic. Contrast this with the quiet, almost inaudible breathing when chloroform is given. Personally, I never give chloroform without a feeling of anxiety, although I wouldn't go so far as to say that it should never be administered; the cases must be few and far between in which it is indicated. Young children, as a matter of fact, take ether readily and safely and I have never seen any bad after-consequences. No one has as yet referred to the necessity of getting the very best quality of any anæsthetic which it may be necessary to use. Duncan and Flockhart's chloroform is the best in the market, and although it costs double the amount of ordinary chloroform it is cheap at the price. The best ether I ever had was some I imported through Maw, Son, and Thompson. It was made in Germany, and the giving was a very easy process, and attended by very little struggling and cyanosis.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE special general meeting of the Branch was held at the Royal Society's Room, Sydney, on Friday, 22nd February, 1895. Present: Dr. Crago (President), Drs. F. W. Marshall, Barkas, Chisholm, Knaggs, Bowman, Dowdell, Gill, McLeod, J. Parker, Thring, C. Terry, Cumming, Foreman, Neill, Tidswell, Jenkins, Faithfull, Bowker, G. A. Marshall, J. A. Dick, Wilkinson, O'Reilly, Pockley, Newmarch, Fiaschi, Mullins, Todd, Kyngdon, Clark, Quaife, A. F. Parker, Morgan, Martin, Trindall, Collins, MacCulloch, Thos. Dixon, Huxtable.

The hon. secretary read the circular convening the meeting for the purpose of discussing the memorandum and articles of association.

The PRESIDENT stated the reasons for calling the members together.

Dr. HUXTABLE proposed,—“That the memorandum and articles of association, as printed and circulated among the members, be adopted.”

Seconded by Dr. THRING.—Carried unanimously.

A discussion ensued, in which Drs. Pockley, Huxtable, Foreman, Newmarch, Wilkinson, Crago, and F. W. Marshall took part.

Dr. HUXTABLE proposed,—“That the transfer of all moneys, books, periodicals, or other properties of the New South Wales Branch of the British Medical Association, to the incorporated body of the same name, be authorised and confirmed.”

Seconded by Dr. KNAGGS, and carried unanimously.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting of the Victorian Branch was held in the Austral Salon, Melbourne, on Wednesday, February 20th, at 8 p.m. Present: The President (Dr. Snowball) in the chair, Drs. Meyer, Davenport, Cuscaden, Noyes, Henderson (A. V.), Lawrence, Black, Cobb, Sutherland, Hughes, Hamilton-Russell, Syme, and Mullen.

Owing to the unexpected absence of Drs. Gray, Grasswell, Stirling, and O'Sullivan, whose names were upon the notice paper for papers or notices of motion, the ordinary business of the meeting had to be postponed. A pleasant evening, however, was spent in the examination of the following exhibits:—

1. Dr. DAVENPORT showed a case of Myxoedema in a youth aged 18½; weight, when treatment was commenced on January 4th, 5 stone; height, 3ft. 11in.; girth at umbilicus 28in., at nipple line 25in. He presented all the well-known signs in hair, skin, &c., to a very marked degree. Placed upon B. and W.'s thyroid tabloids, he re-acted marvellously. At the time of exhibition, after six weeks' treatment, he had lost 1st. in weight, but gained 1½in. in height. The skin is acting, hair beginning to grow, mental and bodily habits are disappearing. The myxoedema was just noticed at six years of age, and had had no treatment up to the present. The case will be reported in full later on.

2. Dr. LAWRENCE showed case of Lymphangioma Cavemosum. Miss E. T., aged 17 years, consulted me at St. Vincent's Hospital some six weeks ago. She then stated that her right hand had always been somewhat larger than her left (a statement which was supported by her mother's history of the case), and that during the last twelve months her hand increased

to such a size that it was now becoming awkward for her in carrying out her duties as a needlewoman. She further stated that she always had perfectly good health, and that this enlargement of the hand and forearm was her sole trouble.

On examination, I found her right hand considerably larger than the left. That on closer examination, one noticed small warty-looking formations; also that several new growths more deeply situated, and about the size of Kentish cherries, could be felt upon the proximal ends of the fingers, and upon either side of hands.

One of these tumours I excised for microscopical examination. However, as I intend reporting this case in full at a later date, I will not now trouble you with the results of our examination.

My chief reason for bringing the case under your notice is for the purpose of obtaining any suggestions the surgeons present may have to make, as to suitable treatment in such a case.

It is not often one gets a case of skin disease which calls directly for the aid of a surgeon, but here, I think, we have one which will need some active mechanical interference in order to obtain any improvement upon the present condition.

My second case is one of Lichen Planus. Here again I seek the benefit of a consultation for my patient, but this time with the physicians.

M.G., *æt.* 40 years, married, has several children; came to Australia from Russia some eight years ago. Soon after her arrival, patches of alopecia areata developed upon her head, and have now produced almost complete baldness. Has also had sensations of pins and needles in the arms for some two or three years. The Lichen Planus is now of some four months standing, and in spite of palliative and aggressive measures not only persists, but is steadily gaining ground.

Her case is interesting, as it bears out, to some extent, Malcolm Morris' theory of the etiology of Lichen Planus, *viz.*, being due to some nerve disorder. For in this case, beside the pins and needles, you have also the constantly increasing condition of the alopecia areata, evidently of a neurotic type. Some years ago she had a severe shock, due to her falling down some steps whilst carrying her then baby twins in her arms, and I think that very likely her troubles owe their origin to the shock of this accident.

3. Dr. NOYES showed a case of Lichen Planus. K., aged 40 years, a man in robust health. The eruption commenced six months ago as discrete flat-topped irregularly-shaped papules of a dull red colour, and first showed itself upon the flexor surface of the wrist and then spread to the inside of the arm in the region of the elbow, and later to the legs in the latter position. The papules have aggregated into patches, some of which have become large varicose masses.

The case is shown as a typical example of lichen planus in a patient in whom there are no neurasthenic or constitutional symptoms.

4. Dr. MULLEN showed, for Dr. Springthorpe, kidneys, supra renal capsules, and portions of the intestines of a case of Addison's disease. Patient had died within a few hours after admission into hospital, and no history had been obtainable. The supra renal capsules showed well advanced caseation. The Peyer's patches were pigmented. There had been no noticed implication of connected nerves. The skin appearance had been extensive and characteristic.

The honorary secretary forwards the following list of papers and exhibits, which were before the Branch last

year, but which were unavoidably omitted from the annual report:—

PAPERS.

H. O'Hara.—Notes on three cases of Nephrolithotomy. The stones removed were shown, and two of the patients.
F. Meyer.—Notes on a somewhat uncommon Ovarian cyst. Specimen shown.

W. Roeckel.—Scoliosis.
G. A. Syme.—Notes on some cases of Renal Surgery.
J. W. Springthorpe.—Tuberculin as a diagnostic agent.
E. A. Sterling.—Notes on (a) Hydatid of the Femur. (b) Multiple Suppurating Hydatid Cyst of the Liver. (c) Fracture of the Orbital Process of the Malar Bone. (d) Two cases of amputation at the hip-joint.
D. Cameron.—Cryptolthiasis.

J. Lalor.—Notes on a case of Blood-poisoning following a bite from a platypus.

W. Roeckel.—Scoliosis and Genuvalgum.
L. Henry.—Some points in the treatment of Typhoid Fever.
J. W. Springthorpe.—A New Food for use in Typhoid and other fevers. (Specimen of food shown).

R. A. Sterling.—Notes of cases of External Urethrotomy.
H. Lawrence.—Cases of Skin Diseases with Bacteriological Experiments.

J. G. Carstairs.—An inquiry into the change of type in the Specific Fevers: Its nature and causation.

J. W. Springthorpe.—New Forms of Disease. (1) Micrococcus Tetragonus. (2) Bacillus of Malignant Oedema.

J. W. Springthorpe.—Further illustrations of the Diagnostic value of Tuberculin.

F. Meyer.—A chronic case of Inversion of the Uterus successfully treated.

H. O'Hara.—Hysterectomy.
M. N. O'Sullivan.—Notes on a case of diffuse peritonitis. Abdominal Section. Recovery.

EXHIBITS.

H. O'Hara.—Vesical Calculi.
F. Meyer.—Adenoid Tumour of the Ovary.

E. A. Sterling.—Two cases of Amputation at the hip-joint.
J. Lalor.—Claws of male platypus showing glands.

J. W. Springthorpe.—Case of Rheumatoid Arthritis.
J. W. Springthorpe.—Syphilitic case simulating Lupus.

C. S. Ryan.—Cirroid aneurism in a girl set. eleven.
J. Coane.—Patent operating Table and Chair. Designed by himself.

H. O'Hara.—(1) Resection of the Knee. (2) Angioma of Chest Wall in relation to the Subclavian Artery.

H. Lawrence.—Various guinea-pigs inoculated with Ringworm Fungus.

W. K. Hughes.—Two cases of Mastoid Disease.
J. W. Springthorpe.—Primary Tubercular Ulcer of the Pharynx. Cured by Tuberculin.

M. N. O'Sullivan.—Eight fibromyomatous Uteri removed by the Intraperitoneal Method; two Ovarian Dermoids; Proliferating Cysts of the Ovaries.

F. Meyer.—Dermoid and Fibroid Tumours of the Ovaries.

Dr. Springthorpe reports the following further cases of diphtheria in which Aronson's anti-toxin was used without success:—

9. A. K., aged fifteen months, sent into hospital February 22nd, 1895, with a history of a week's illness, but implication of larynx only the previous night. Dr. Dyring, of Coburg, forwarded the case immediately after seeing it. On admission, patient was practically moribund. With some difficulty, a tracheotomy was performed by Dr. Horsfall, and that nothing might be left undone, 1 c.c. anti-toxin was injected. The patient, however, died the same evening.

10. M. R., aged two and a half years, first seen on the evening of February 14th, with Dr. Clendinnen, and at once injected with 1 c.c. The history was of two days' illness, with nasal discharge, and one day's implication of the throat. Already, however, there was laryngeal mischief, and very marked retraction. The throat, tonsils and pharynx were covered with membrane, and there were crepitations as well as rhonchi at the bases of the lungs. The case was at once sent to hospital, and tracheotomy performed. It was then found that the membrane was so adherent to the trachea that it could not be removed. Further anti-toxin being unavailable, repeated large doses of hydrarg. perchlor. were given. Strychnine was thrice injected, but without avail, the patient sinking gradually.

Remarks.—These two cases illustrate the statement that the anti-toxin may prove without effect either through being used too late, or in too small a dose.

PROCEEDINGS OF OTHER SOCIETIES.

EASTERN SUBURBS MEDICAL ASSOCIATION OF SYDNEY.

A GENERAL meeting of the above association was held at the Paddington Town Hall, on Friday, January 25. There were present: Drs. Barkas (in the chair), C. A. Edwards, W. A. West, T. M. Martin, G. L. Mullins, J. Ashburton Thompson, Laure, F. H. Quaife, A. F. Parker, P. J. Collins, L. Neill, T. M. Kendall, Clubbe, Bucknell, Tidswell, and J. A. Dick.

After the formal business had been disposed of, the President called upon Dr. Mullins to read a paper on

THE EPIDEMIC DISEASES AND THEIR PREVENTION IN THE EASTERN SUBURBS.

In the course of this paper Dr. Mullins showed that the death-rate of the eastern suburbs (Paddington, Woollahra, Waverley, and Randwick) was lower than that of any group of suburbs around Sydney. During the four years 1890-1-2-3, there were 42 deaths from influenza, 28 from whooping-cough, 26 from measles (all these occurred in 1893), 24 from typhoid fever, 20 from diphtheria, 15 from scarlet fever. Influenza has almost died out since the epidemic of 1891. Whooping-cough has lately been very prevalent in the district. "There is little doubt," said Dr. Mullins, "that this disease is spread by means of schools and by want of proper isolation. Indeed, I am disposed to think that want of proper isolation is the direct cause of the introduction of the disease into our district. Most of the children suffering from whooping-cough are apparently well in the intervals between the paroxysms, and parents, in order to give them fresh air, bring them to the seaside resorts—Bondi, Bronte, Coogee, &c.—and with them comes the infection which is imparted to healthy children, in the trams or other vehicles by which they travel."

Typhoid fever is essentially a filth disease. It is held by some that the specific microbe of typhoid is a spore-forming bacillus, and that these bacilli are expelled from the intestine of an infected person in large numbers, and may remain active for a long period of time. But there is no clear proof as yet that it is necessary for the spore-bearing bacillus to have passed through the intestine before becoming specific. The principal causes of typhoid, and indeed of all diseases which are usually termed "preventable," are a polluted water supply, decomposing matter, and foul air from drains. It is held by some bacteriologists in England that typhoid fever might spring from epidemic summer diarrhoea, and that the specific organism might proceed from an evolution of the bacterium coli commune. It is at any rate certain that many of the causes of acute diarrhoea and enteric fever are apparently the same. Some authorities assert that whooping-cough and scarlet fever are antagonistic, and that the two diseases cannot exist in the same locality at the one time. This theory has been amply disproved in Waverley, where the two diseases have lately been epidemic—cases of both appearing in the same house, and even in the same patient. Dr. Mullins enumerated the various modes of dissemination of the diseases, and insisted upon thorough cleanliness as a means of prevention. Without cleanliness all other means can be of no avail. A Public Health Act is an urgent necessity. The various councils should combine among themselves to stamp out epidemic diseases. This might be done by inter-municipal notification of disease, the establishment of an Infectious Diseases Hospital, the destruction

of old and infected buildings, the regulation of domestic animals, and the appointment of trained medical officers of health. Deaths should be registered within seven days, and should be registered in the municipality in which they occur. All infectious diseases should be notified, as in England—the advantages of such notification are obvious. Isolation of patients should be made compulsory, disinfection of the sick room and house should be scrupulously carried out. Typhoid stools especially should be carefully treated. A good plan for the disinfection of typhoid stools is the following: Place at the bottom of a bed-pan some sawdust soaked in a solution of corrosive sublimate. On this receive the stools, and then cover with another layer of prepared sawdust. A quantity of sublimate solution is then poured over the whole; the pan is covered, and is allowed to stand for two hours before throwing the contents into a closet. Children suffering from infectious diseases should not be allowed to mingle with healthy persons until all danger of infection is passed. Other provisions to be insisted upon in the event of a Public Health Act being brought forward, are the prevention of "wakes" or other exposure of the body of any person dying of a communicable disease; early burial; and the use of mourning coaches as hearses should be forbidden. Medical men can do little of themselves, but they must seek to enlighten the public mind, and point out to the masses the dangers that threaten the community at large from dirty and insanitary premises.

Dr. QUAIN said this interesting subject had been treated in a most exhaustive manner by Dr. Mullins; yet there were some points open to discussion. The powers of the Borough Councils were limited; they had no power to destroy buildings; they must report the matter to the Board of Health. Dairies were now inspected regularly. An Act giving larger powers to the Councils should, no doubt, be obtained. There could be no question that whooping-cough and scarlet fever were spread through the ignorance and carelessness of parents. He advocated the use of ferrous sulphate as a 'disinfectant.' It was not poisonous like corrosive sublimate.

Dr. EDWARDS said that if we wanted to do any good we must direct our energies to impressing upon the public the necessity for reporting all infectious cases as soon as they appeared. He thought many persons had an objection to the establishment of a fever hospital in our midst. Surely, the time had arrived when we should have well-trained inspectors, so that such important matters should be dealt with in a proper manner, and every zymotic area inspected and reported upon systematically.

Dr. CLUBE said an Act giving power to deal with infectious diseases should be passed. It was almost impossible to properly isolate such cases now, and, as public opinion was against fever hospitals, it was difficult to say what should be done. The Coast Hospital is not nearly large enough to cope with epidemics; it was, therefore, advisable that proper accommodation be provided without delay. We know how to disinfect properly, but we have not the power to enforce our knowledge. A good Health Act with stringent penalties should be passed at once.

Dr. JIDSWELL detailed the means of preventing disease in England, and gave personal experiences of his visit to London.

Dr. ASHBURTON THOMPSON said people were not educated up to a proper standard of sanitation. The public should be impressed with the necessity for improved sanitation. As a matter of fact, we are exactly where we were 15 years ago. We have no proper

organisation. We have a Board of Health, but it is not in communication with the Government Statist or the Water and Sewerage Board. All these should be brought to a focus under one central health authority. At present, each department dealt with its own business without reference to any other department. He urged the necessity for educating the public, and inducing the press to advocate a measure of public health.

Dr. KENDALL also urged the necessity for a central health authority. The eastern suburbs were almost free from typhoid fever, yet there remained much to be done.

Dr. MULLINS replied, and the meeting terminated.

QUEENSLAND MEDICAL SOCIETY.

THE 98th general meeting of the Society was held on the 12th February, in the Society's rooms, George-street, Brisbane. Present: Dr. Hill (President) in the chair, Drs. Little, Urs, Gibson, Love, Freshney, Lawes, Thomson, Ashworth, Bancroft, Byrne, and Hardie. Visitor: Mr. Pound, Government Bacteriologist.

EXHIBITS.

Dr. Love exhibited a child with spastic hemiplegia, following a severe attack of typhoid fever, complicated with broncho-pneumonia. The forearm was most affected, the supinators and extensors being so rigid as to prevent any but passive movements of a co-ordinate character. Occasionally a mobile spasm, suggesting athetosis, was noticed. The disease had lasted six years, and was not influenced by treatment.

Dr. Ashworth showed a case of injury to the hand, illustrating the value of conservative surgery. About 7 a.m. on day of admission, patient, aged nine years, got his hand caught in a chaff-cutting machine. The knife had injured all the fingers of the left hand. The extensor tendon of index finger was cut, and the metacarpo-phalangeal joint laid widely open, an incision about half an inch long being made in the cartilage on the head of the metacarpal bone. The first phalanx of the middle finger and the extensor tendons were completely divided, and the flexor tendons injured. The ring finger was similarly injured, but the flexor sublimis tendon was divided, and the profundus tendon incised. The joint between the first and second phalanges of the little finger was opened, the extensor tendons being divided to the extent of about half its breadth. The wounds were syringed with a 1 in 20 solution of ac. carbol. The ring finger was removed about a quarter of an inch from the injured articulation, and the extensor and flexor tendons were stitched together over the cut extremity of the phalanx. In the other fingers the tendons were united with catgut sutures, and the skin incisions with horsehair. The boy made a good recovery, and now has perfect movement of the index, little, and stump of ring fingers. The middle finger still remains much stiffened, but its metacarpo-phalangeal joint, which was uninjured, possesses complete movement.

Dr. Lockhart Gibson showed a young man with congenital complete absence of the iris in one eye, and partial absence in the other eye. A partial lamellar cataract in the less defective eye helped in an interesting manner to protect the retina from flooding of light. The Treasurer's report for the year 1894, showing a balance of £39 18s. 2d., was read and approved.

It was moved by Dr. GIBSON, and seconded by Dr. LITTLE:—"That the hon. secretary be authorised to write to the New South Wales Branch of the British Medical Association, requesting, if possible, more direct interest in the *Australasian Medical Gazette*," it being

specially pointed out that the Queensland Medical Society had given its undivided and loyal support to the *Gazette* since its inception nine years ago.—Carried.

The hon. secretary presented to the society, on behalf of Dr. Ahearn, Townsville, a photograph illustrating his paper before the sanitary section of the Australasian Association for the advancement of science, on "The effect of the Queensland Government Educational Regulations on the physique of North Queenslanders."

Dr. Thomson also presented to the Society, diagrams illustrating the difference between poisonous and non-poisonous snakes.

It was proposed and seconded that Drs. Thomson and Wilton Love and the hon. secretary wait upon the Colonial Secretary, requesting that Mr. Pound be asked to undertake the manufacture of anti-toxin for diphtheria.—Carried.

Dr. Thomson read his paper on "The Radical Cure of Inguinal Hernia," which will appear in our next issue.

Dr. Lockhart Gibson thanked Dr. Thomson for his very clear description of Kocher's operation, and congratulated him upon his results. He asked the length of time through which any cases had been watched, mentioning that Koenig agreed with Socin in thinking that if there be no return of hernia in the same place within two years of the operation, it is unlikely that any will reappear in that place. He mentioned that Koenig, in 1889, accepted Socin's statistics as being probably correct for fatal cases and relapses, viz., an all-round mortality of 6 per cent. and an all-round return of 50 per cent. Kocher's operation seemed to promise much better results than these.

Drs. Love, Byrne, and Hill also joined in the discussion. Dr. Thomson replied, stating that his cases had been watched for a period of from 3 to 12 months.

An interim report on the treatment of Diphtheria by anti-toxin at the Hospital for Sick Children, Brisbane, was then read by the Resident Surgeon, Dr. Ashworth. It may here be noted that, with the exception of Case 1, where no culture was made, the diagnosis was verified by bacteriological examination of cultures and sub-cultures in Glycerine agar, a full report of which was read by Dr. Wilton Love, and is appended hereto.

BACTERIOLOGICAL REPORT ON CASES OF DIPHTHERIA TREATED BY ANTI-TOXIN IN CHILDREN'S HOSPITAL, BRISBANE, TO FEB. 11, 1895.

CASE 1.—E—B—, died. No bacteriological examination made.

Case 2.—R—N—, recovered. A tube of glycerine-agar was inoculated with a piece of membrane freshly removed from the throat. The tube was placed in the incubator at a temp. of 37.5° C. In thirty-six hours numerous well-defined colonies of diphtheritic bacilli were observed, together with three distinct colonies of *S. pyogenes aureus*. The diphtheria colonies presented the appearances which are described as typical, viz.: Round or oval coarsely granular discs with rather ill-defined margins, grayish yellow in colour, a rough, almost reticulated surface, as seen under a low-power O cover glass—preparations were taken from both type of colonies, and stained with carbol fuchsin and Loeffler's blue. They presented the following characters as described by Steinberg: Rods with rounded ends, straight or slightly curved, having a diameter of 5 to 8 mm. and from 2 to 3 mm. in length. Irregular forms are very common, and are indeed characteristic of the bacillus. One or both ends may appear swollen, or the central portions may be notably

thicker than the extremities, or the rod may be made up of irregular spherical or oval segments. Aerobic—does not liquefy gelatine—non-mobile, grows on various culture media at a temp. of 20 degrees to 42 degrees C, the most favourable temp. being about 35 degrees C. It grows readily in nutrient agar, glycerine agar, or alkaline bouillon, but the most favourable medium is Loeffler's, viz., three parts blood-serum, with one part bouillon containing one per cent. peptone, one per cent glucose, and five per cent. NaCl. On this medium in twenty-four hours appear large round elevated colonies of a greyish-white colour and moist appearance, while other associated bacteria will, as a rule, not yet have developed colonies large enough to interfere with the recognition of these. Milk is a favourable medium for the growth of this bacillus, and as it grows at a comparatively low temp.—20 degrees C. (68.2 F.)—it is evident that this fluid may become a medium for conveying the bacillus from an infected source to healthy throats. Cultures of the *D. bacillus* may retain their vitality for several months, and when dried upon silk threads, for several weeks, colonies are still developed in a suitable medium. In dried diphtheritic membrane the *D. Bacillus* retains its vitality for nine weeks in small fragments, and in larger pieces from twelve to fourteen weeks. The thermal death-point is 58 degrees C. (138 degrees F.) for ten minutes.

Case 3.—A—D—, convalescent. Cover-glass preparations did not show any *D. bacilli* with certainty. The first tube inoculated gave a negative result, no organism of any kind developing. This may be explained by the inoculating needle being too hot, or by the fact that the particular piece of membrane selected had been affected by antiseptics. A second attempt from the piece of membrane coughed up gave a very large preponderance of staphylococci *p. aurei* with some diphtheria B., which latter were transferred to a fresh tube, and showed definite evidence of *D. bacilli*. The other tube inoculated from the intubation tube after removal yielded an almost pure culture of *S. P. aureus*.

Case 4.—F—B—, Convalescent. Cover-glass preparations from the membrane showed diph. bacilli with staphylococci, diplococci and leptothrix filaments. Inoculation of glycerine agar gave undoubted colonies both of *D. B.* and staphylococci in twenty-four hours.

Case 5.—M—M—, Died. Membrane removed after death and tube inoculated. In less than twelve hours numerous colonies, which proved by microscopic examination and sub-culture to be *D. B.*, also streptococci and staphylococci.

Case 6.—P. J. M—, Convalescent. Culture on glycerine-agar showed diphtheria bacilli and a very copious growth of pyogenic micrococci.

In discussing the bacteriological evidence, Dr. Love regretted that no such examination had been attempted till recently; hence an exact comparison of results would be difficult in the future. He was able to give the figures of the diphtheria cases treated in the Children's Hospital, Brisbane, for the past five years:—

Year.	Laryngeal		Faucial, nasal etc.		Total Cases.	Total deaths.	Total Mortality per cent.
	Cases.	Mortality per cent.	Cases.	Mortality per cent.			
July to Dec. 31 '94	11	45 per cent	16	6.25 per cent	27	6	22.2 per cent
1893-4	60	80	33	9.1	93	39	42
1892-3	42	47.6	30	3.3	72	21	29.1
1891	..	..	..	..	26	14	53.8
1890	..	..	..	..	28	30	52.6
Totals.					266	100	37.6

CASE 1.

E—— H—— B——, aged 8 years 1 month. Admitted January 10, 1895, under the care of Dr. J. Lockhart Gibson. Child's mother noticed he was hoarse on January 8, and saw a medical man on January 10, who said the child was suffering from diphtheria.

Date.	Estimated day of Disease.	Time.	Temp.	Pulse.	Resp.	Urine.	Remarks.
Jan. 10	3rd	9 p.m.	101.4	140	40		Breathing noisily, cough croupy. Foments applied to the throat, and steam kettle applied. Child has grown rapidly worse, is now pallid, and markedly cyanotic. Intubated at once. Treatment R·Tr Ferri Perchlor L. Ferri. Perchlor 10 minims Potass. Chlor. 1 grain Glycerine 10 minims, and water, to 1 drachm, every hour. Throat sprayed every hour with R Ac lactic Sij, aq. Calcis ad 3vij. Also given a teaspoonful of brandy every two hours. After intubation there was a good deal of coughing, and patient vomited all his nourishment.
		12 mid-night	103.6	164	48		
Jan. 11	4th	2 a.m.	103.6	160	48		Cold pack for 20 minutes. Temp. reduced to 102. Cold pack for 35 minutes. Temp. reduced to 102.8. Lips somewhat blue. Also nasi working. Face pale, with a yellowish tinge. Slight stridor. Eyes half closed. Breathing abdomino thoracic. Very little movement in upper part of thorax. Considerable retraction of lower ribs on both sides of thorax on inspiration. Patches of membrane noticed on both tonsils. The anti-diphtheric serum having just arrived, 20 c.c. (Ruffer's) were at once injected into the subcutaneous tissue of the right side of abdomen. During the course of the afternoon moist sounds were noticeable over the greater part of the lungs. The boy was given quinine gr. ij. every three hours, brandy one teaspoonful every hour, and packed or sponged frequently, but in vain, and he died at 12.15 a.m. on January 12. He had a slight convulsion at 11.15 p.m. on January 11.
		9 a.m.	103.8	160	60		
		2 p.m.	104.8	172 dropping a beat occasion- ally	71		
		7 p.m.	107	184	84		
		11.30 p.m.	106	200	80		

CASE 2.

R—— N——, aged four years. Admitted January 18, 1895, under the care of Dr. P. Bancroft. There were large patches of membrane on both tonsils on admission.

Date.	Estimated day of Disease.	Time.	Temp.	Pulse.	Resp.	Urine.	Remarks.
Jan. 18		4.30 p.m.	102.6				Large patches of membrane on both tonsils. Boy put on x. minims Tinct. Ferri Perchlor x. minims Potass. Chlorat gr. j., Glycerine x. minims Aq ad 3i. every hour, and the throat was sprayed with a 2.5 per cent. of Ac. carbol. in lime water. Boy has a good colour; breathing easily. Glands at angle of jaw distinctly swollen. Lungs clear; heart clear. 16 c.c. of Ruffer's anti-diphtheric serum were injected into the subcutaneous tissue of the abdomen on the right side. Culture tube inoculated from the throat.
		6 p.m.	102	126	28		
		9 p.m.	99	112	26		

CASE 2.—Continued.

Date.	Estimated day of Disease.	Time.	Temp.	Pulse.	Resp.	Urine.	Remarks.
Jan. 19		8 a.m.	102.4	124	28	A trace of albumen.	Left tonsil cleaning of membrane. Right tonsil still has a good deal on it, but this is much swollen, and seems loosely attached. Round the point of injection of serum is a long streak of light redness, stretching downwards and inwards.
		9 a.m.	101	140	28		
		8 p.m.	100.8	140	32		
		9 p.m.	101.8	120	28		
Jan. 20		8 a.m.	100.6	112	26	A trace of albumen.	Membrane still on both tonsils, but very much thickened and swollen. Blush still around point of puncture. Membrane came off tonsils on a swab.
		9 a.m.	100	112	26		
		3 p.m.	99.4	100	24		
		9 p.m.	98.8	100	22		
Jan. 21		8 a.m.	99.6	100	24		Left tonsil almost clean. Right tonsil still has a couple of patches, which seem covered with a semi-transparent substance.
		9 a.m.	98.8	100	20		
		3 p.m.	98.4	100	24		
		9 p.m.	98	94	22		
							Temperature remained normal henceforth, sometimes becoming sub-normal. Another culture tube was inoculated on January 25 from the right tonsil, and the throat was clear on January 27. Boy was discharged cured on February 26.

CASE 3.

A ——— D ——— D ———, aged 3 years 4 months. Admitted January 31, 1895, about 8 p.m., under the care of Dr. Hardie. Boy had been ill about ten days. He had complained of sore throat for about five days. Some difficulty in breathing came on the night before he was brought to the hospital.

Date.	Estimated day of Disease.	Time.	Temp.	Pulse.	Resp.	Urine.	Remarks.
Jan. 31	10th	—	99	132	40		Cough croupy. Large patch on left tonsil. Glands about left angle of jaw enlarged. Some slight obstruction to breathing audible. Boy was put to bed, with blanket tent and steam kettle started. Patient was given x minims Tr. Ferri Perchlor, x minims Potass Chlorat. gr. j, Glycerin x minims Aq. ad 3 i every hour, and spray for the throat, consisting of equal parts of Ac. sulphurous (B.P.) and water was ordered to be applied every hour, but the boy would not submit to it.
		9 p.m.	101.4	104	30		
Feb. 1	11th	8 a.m.	100.4	120	36	Albumen 1-6th Oxyhæmo- purphyrin copious.	By 11 a.m. the difficulty of breathing had increased so much that the boy was at once intubated, and his colour thereupon improved. Lungs clear; heart clear. Patches of membrane, not very large, on both tonsils. Glands about left angle of jaw enlarged. Culture tube inoculated. Aronson's anti-toxin minims. xij injected.
		9 a.m.	100	120	30		
		12 noon	101.6	142	32		
		3 p.m.	102.2	140	40		
		9 p.m.	102.6	144	40		About 11 p.m. he coughed up a large piece of membrane.

CASE 3.—Continued.

Date.	Estimated day of Disease.	Time.	Temp.	Pulse.	Resp.	Urine.	Remarks.
Feb. 2	12th	3 a.m. 9 a.m.	101.4 100	146 120	38 30	Albumen 1-3rd	Thickish yellow patch on left tonsil; still some membrane on right tonsil. Boy's colour pale, and somewhat yellowish. Breathing comfortably; no recession of ribs. At 12 noon xv minims of Aronson's anti-toxin were again injected.
		3 p.m. 9 p.m.	101.4 101.8	160 140	40 40		
Feb. 3	13th	3 a.m. 9 a.m.	100 100	144 140	30 32		Still a piece of membrane on left tonsil, and also a trace on the right. Boy's colour is improved. Breathing easy.
		3 p.m. 9 p.m.	100.4 100.4	130 126	30 36		
Feb. 4	14th	3 a.m. 9 a.m.	99.4 100	124 120	28 26		Right tonsil apparently clean; still a trace of membrane on left. Colour pale, but much improved. Lips a fair colour.
		3 p.m. 9 p.m.	100 99.6	120 120	28 36		
Feb. 5	15th	3 a.m. 9 a.m.	99.4 100.6	120 124	34 24		Very small trace of membrane at back of uvula. About 14 c.c. of a watery solution of B.I.P.M. dried anti-diphtheritic serum, with 5 per cent. Ac. Carbol injected into subcutaneous tissue of abdomen. Intubation tube extracted.
		3 p.m. 9 p.m.	100.8 98.4	134 100	40 26		Practically no swelling at point of injection.
Feb. 6	16th.	3 a.m. 9 a.m.	98.4 100.4	100 128	20 38	albumen +	Throat almost clean, boy breathing quite comfortably.
		3 p.m. 9 p.m.	99.4 98	106 100	34 20		About 1 p.m. boy became suddenly very pale, pulse almost imperceptible, extremities cold. Given brandy one teaspoonful at once, and put on R. Lig. Strych. π j. Tr. Stroph. π j every two hours and brandy a teaspoonful every hour and a half.
							From this time forth the boy progressed satisfactorily, and should be discharged cured on Feb. 20. The albumen in the urine disappeared on the 18th.

CASE 4.

F——— S——— B——— aged 3 years 4 months, admitted Feb. 5, about 10 a.m., under the care of Dr. Love. Boy has been ailing four days. Had a convulsion two days ago.

Date	Estimated day of disease.	Time.	Temperature	Pulse.	Respirations.	Urine.	Remarks.
Feb. 5	5th	12 noon	103.2	140 fair	52		Expansion of chest fair, percussion note resonant, no recession, lungs clear, voice husky, face not cyanotic. Glands under left side of jaw considerably enlarged. Thick, leathery, greenish yellow membrane on both tonsils. 20 c.c. of watery solution of B. I. P. M. dried anti-diphtheritic serum with 5 per cent. Ac. carbol injected under skin of abdomen. Culture tube inoculated from throat.
		3 p.m.	101	130	32		Throat sprayed every hour with 10 volume solution of Hydrogen Peroxide. Also given R. Tr. Ferri Perchlor π x Lig. Hydrarg. Perchlor. π xv Glycerine π xx Aq. ad. 3j. every hour.
		9 p.m.	98.4	100	24		Practically no trace of swelling at point of injection.

CASE 4—Continued.

Date.	Estimated day of disease.	Time.	Temperature.	Pulse.	Respirations.	Urine.	Remarks.
Feb. 6	6th	8 a.m.	98.4	116	30		Throat cleaner, especially at upper part of each tonsil, membrane on left tonsil more macerated, very yellow. Glands under right angle of jaw larger, boy comfortable, not so hoarse, some watery discharge from nose.
		9 a.m.	99.8	124	30		
		3 p.m.	99.6	118	30		
		9 p.m.	98.4	100	24		
Feb. 7	7th	8 a.m.	97.4	84	24	No albumen.	Membrane still on both tonsils, slight papilliform rash on front of trunk, probably sudamina.
		9 a.m.	99.8	118	26		
		3 p.m.	99.6	112	24		
		9 p.m.	99.6	120	29		
Feb. 8.	8th	8 a.m.	100	124	30		Tonsils much cleaner. Glands diminished somewhat. Piece of membrane (?) removed from right nostril.
		9 a.m.	99.8	124	28		
		3 p.m.	100.2	128	24		
		9 p.m.	99	100	24		
Feb. 9	9th	8 a.m.	98.8	120	28		Throat now clean, very little discharge from nose. Glands at right angle of jaw reduced in size, those at left still considerably swollen
		9 a.m.	99.6	108	26		
		3 p.m.	99.8	126	30		
		9 p.m.	100	120	24		
Feb. 10	10th	8 a.m.	98.4	84	24		
		9 a.m.	99.6	104	24		
		3 p.m.	99.8	100	22		
		9 p.m.	98.4	100	24		
Feb. 11	11th	8 a.m.	98.6	100	24		Papilliform rash on legs.
		9 a.m.	99.4	108	26		
		3 p.m.	99	106	26		
		9 p.m.	98.6	100	24		
Feb. 12	12th	8 a.m.	98.2	80	24		Rash almost gone.
		9 a.m.	98.8	100	20		
		3 p.m.	99	120	24		
		9 p.m.	99.4	84	26		

Case still progressing, but quite favourably.

CASE 5.

M. A. M.—, aged 10 months. Admitted February 8, 1895, about 10 a.m. Under the charge of Dr. J. L. Gibson. Girl was first noticed ailing about six days ago. Two nights ago difficulty of breathing came on, and has been increasing since, the child being now more or less cyanotic.

Date.	Estimated day of disease.	Time.	Temperature.	Pulse.	Respiration.	Urine.	Remarks.
Feb. 8	7th	10.30 a.m.	103.4				Nothing to be seen in the throat. Marked recession of epigastrium at inspiration. Child was intubated at once, but not without considerable trouble, owing to the small size of the throat. Given brandy 3j, and left to recover a while.
		12 noon	105.2	212 almost imperceptible.	116 not regular		Child pallid, and somewhat cyanotic; rather puny. Still some recession on inspiration. Heart sounds clear. Lungs seem clear, but at times large moist sounds may be heard—probably due to mucus in trachea. Culture tube inoculated. 16 c.c. of Ruffer's anti-diphtheritic serum injected beneath skin of abdomen. Further treatment Tr. Fer. Perchlor. mv. Potass. Chlorat gr. 4; Glycerin mx. Aq. ad. 3i. every hour. Brandy 3j. every three hours at first. Later on, this was increased.
		8 p.m. 4 p.m.	105.2 105.2				Died at 5.15 p.m.

CASE 6.

P. J. M——, aged 10 months; twin brother to Case 5. Admitted February 12, 1894. Under the charge of Dr. Hardie. Mother has been daily inspecting boy's throat since the twin sister died. This morning, for the first time, she noticed white patches on the tonsils.

Date.	Estimated day of disease.	Time	Temperature.	Pulse.	Respiration.	Urine.	Remarks.	
Feb. 12	1st	2 p.m.	100	144	36		Some cough. Boy very good colour; breathing easily; no hoarseness; slight papilliform rash on front of chest; glands under angles of jaws enlarged; most on the right side; lungs clear, as far as can be made out. Shreds of membrane on both tonsils, most on the left tonsil; seem to be rather loose. About 5.30 p.m. culture tube was inoculated, and 10 c.c. of Buffer's anti-diphtheritic serum injected into subcutaneous tissue of the right thigh. Treatment: — Tr. Ferri Perchlor mv. Potass. Chlorat gr. $\frac{1}{4}$. Glycerin. mx. aq. ad. \mathfrak{z} i every hour. Throat sprayed with equal parts of sulphurous acid and water every hour. Throat painted every three hours with papain paint.	
		3 p.m.	100					
		9 p.m.	100.4	126	36			
Feb. 13	2nd	3 a.m.	102.6	160	56		Patch has appeared on right soft palate; patch on right tonsil increased; that on left not decreased. Boy still fairly comfortable; right thigh swollen and painful to touch. 16 c.c. of aqueous solution of B. I. P. M. dried anti-diphtheritic serum, with 5 per cent. Ac. Carbol. injected into subcutaneous tissue of abdomen on left side.	
		9 a.m.	102.6	160	44			
		3 p.m.	101.6	44				
		9 p.m.	101.4	136	44			
Feb. 14	3rd	3 a.m.	100.6	130	44		Tonsils apparently clean; patch still on right soft palate; swelling of right thigh almost subsided; slight blush and some hardness at point of injection into abdomen Some diarrhoea.	
		9 a.m.	100	140	34			
		3 p.m.	99	144	40			
		9 p.m.	98.6	120	36			
Feb. 15	4th	3 a.m.	98	128	32		Throat may now be considered clean. Glands on right side of jaw still a little enlarged. Still some hardness at point of injection into abdomen.	
		9 a.m.	98.6	116	30			
		3 p.m.	98.4	106	28			
		9 p.m.	98					
							Boy is now convalescent, and doing well.	

A CORRECTION.—In Dr. Taylor's Presidential address, delivered at the annual meeting of the Queensland Branch B.M.A., and published in our last issue, on page 62, line 44, read *drift* instead of the word *thrift*.

A CORRECTION.—In the discussion at the January meeting of the Victorian Branch B.M.A., on Dr. Springthorpe's paper on "Diphtheria Anti-toxin," Dr. Henry said that the treatment was *not* in accord with modern ideas; the word "not" was omitted by a printer's error in the report on page 57 of our last issue.

NOTICE.—The Annual Meeting of the New South Wales Branch of the British Medical Association will be held in the Royal Society's Room on Friday evening, 29th March, at 8.15 o'clock.

DIPHTHERIA ANTI-TOXIN.—We call the attention of our readers to the special advertisement, in another place, of the New South Wales Board of Health, relating to anti-toxin serum for the treatment of diphtheria.

THE FIRST INDIAN MEDICAL CONGRESS.

DECEMBER 24 TO DECEMBER 29, 1894.

BY OUR SPECIAL CORRESPONDENT, DR. L. W. BICKLE, OF MOUNT BARKER, S.A.

THE Calcutta Medical Congress has come and gone, and must be written down as a very great success. Numerous difficulties had to be faced and overcome to achieve the brilliant result arrived at, and to its worthy president, Surgeon-Colonel Harvey, M.D., I.M.S., D.S.O., and his untiring energies, his great tact and brilliant abilities, both as a speaker and an organiser, must the lion's share of praise be given. He has been most ably seconded by Dr. Simpson and Surgeon-Captain Moir, the general secretaries, whilst the various leaders of the different sections did yeoman service. Delegates from home and other countries were few, many from England, including Dr. Lawson Tait, Priestley, Mr. Durham, and others, were prevented from coming at the last. Scotland was represented by Professor Reid, of Aberdeen, the British Medical Association by Mr. Ernest Hart, Ceylon by Drs. Garvin, Thornhill and Macdonald, France by Dr. Gallay, of Pondicherry, whilst South Australia, alone of the Australian colonies, had a representative (Dr. L. W. Bickle). The Universities of Cambridge and Glasgow, as well as the British Institute of Public Health, nominated representatives resident in India. The Rev. Fathers of St. Xavier's College kindly placed their building at the disposal of the Congress, and most suitable the building proved. The Congress was opened by the Viceroy, the Earl of Elgin, who was supported by the Lieutenant-Governor of Bengal, Sir Charles Elliott, the Bishop of Calcutta, the R.C. Archbishop, and many leading public men, European and native. The large hall was filled with an enthusiastic audience, comprising many lady doctors. The muster roll of members came to about 800 ere the Congress was over, and this, for a first attempt, gives some idea of the success attained.

The Earl of Elgin made an excellent speech, in which he acknowledged, in a graceful way, the services of the medical profession to the public, and stated that he believed one of the first duties of every Government properly organised was to consider how the health of those living within its jurisdiction can be maintained or improved. Whilst admitting the great room for improvement in the East, he pointed out that the boasted civilization of the West was not too perfect, even in matters sanitary, and, whilst believing in reform, he deprecated legislation too far in advance of public opinion, as likely to retard rather than advance the matter it had at heart. He favoured the formation, first, of a healthy public opinion, on which alone mature success could be assured. He then asked the President to deliver his opening address.

Dr. HARVEY then read his address, which was lengthy, but not tedious, and abounded in apt quotations, and its graceful literary style placed it in the very front rank of presidential addresses. It dealt mainly with Indian medical questions, and the suggestions as to needed reforms were made with a fearlessness unusual in anyone prominent in official service. One remark of his is especially worth quoting. Referring to certain difficulties that had to be faced in getting the Congress together, and the difficulty lying in the path of reform, he said, "But what are difficulties? Gentlemen, difficulties are things to be overcome."

The proceedings closed with votes of thanks to the Viceroy for presiding, and to the President. Mr. Ernest Hart seconded the vote to the Viceroy, proposed by Surgeon-General Bradshaw, and in his remarks referred to his belief that one can eat cholera and drink cholera, but one cannot catch cholera as measles and scarlatina are caught. Sir C. Elliott, the Lieutenant-Governor of Bengal, proposed the vote to Surgeon-Colonel Harvey, and Dr. Gallay added a little novelty by seconding the vote in French.

In the work of the Congress, there were many valuable papers contributed, and the various addresses of the presidents of sections were able, thoughtful papers. In medicine, Dr. Crombie, in his opening address, discussed the various forms of fever—remittent, intermittent, typhoid, and others. An abstract of this paper will be given later on. Considerable time was devoted in this section to the subject of typhoid and typhus fevers and their allied forms, both from a prophylactic and therapeutic standpoint. Cholera naturally came in for a large share of notice. Professor Hufkeim contributed a paper, and it is admitted by him that, so far, the method of inoculation is on its trial. It is claimed by many, including Dr. Simpson, the Health Officer of Calcutta, that the results, so far, justify further trials and observations, although they admit, so far, its practicability is not yet assured.

Snakebite, too, came in for a fair share of treatment, but Dr. Elliot, the Professor of Biology at Madras, and the writers of papers on the subject, do not favour to any extent the Muellierian treatment. Some claim that the method of death from the bite of the cobra and that from Russell's viper are so absolutely different that it is impossible that the same remedy can be equally efficient, the bite from the viper producing tetanic convulsions. It is worth while remembering the conclusions drawn by Dr. Huxtable in his paper at the last Sydney Congress. If not useful in all cases, and not a perfect antidote, there can be no doubt, I think, that the value of strychnine in snakebite is well-established. Especially is it likely to be useful where alcohol has been given to excess, or where fright is a predominant factor. Pneumonia, diabetes, dysentery, anchylostoma, &c., were also treated in their section of medicine.

In surgery, Surgeon Lieutenant-Colonel Lawrie, of Hyderabad, gave the address as president. He took for his theme the influence on surgery of Pott, Syme, Simpson, and Lister. He referred to the value of Pott in raising surgery to a rational science from one of confusion and ignorance. Syme consolidated the principles, Pott enumerated and established them on a firmer basis. As to Simpson, as the originator of chloroform, what could be said of him that would express the value of his discovery? He upheld the value of the finding of the Hyderabad Commission, and claimed the immunity from accident in the giving of chloroform in India arose from the attention to the principles and practice of Simpson and Syme, viz., free admixture of air—the more rapidly the anæsthetic is given the better—and attention to the respiration. Dr. Bamford, to whom was due the success of the Hyderabad Commission, had shown that the action of the *vagus* under chloroform is beneficial, and not injurious. Its stimulation is good, in its paralysis lies the danger.

I may say that ether is but rarely, if ever, given in India, and when the enormous number of chloroform administrations is considered (and no one who has not visited India and seen its surgical work can form anything like an adequate idea of their number) and the few accidents from its use, the detractors of chloro-

form, both in Australia and England, must modify the often exaggerated statements of the superiority of ether to chloroform.

Cataract came in for a large share of attention, and no wonder, since many surgeons number their cataract cases by the thousand. At Benares, the day previous to my visit, Dr. Freyer had done sixteen cataract cases, and he did three more on the day I was there, making nineteen in two days—a marvellous record. The question of with or without iridectomy is still unsettled, some noted operators never doing it. Others always perform iridectomy, whilst a still smaller number make it elective, according to the case.

Stone in the bladder was freely discussed, and there could be no doubt that litholapaxy is the favourite method of the men who have most cases, whilst the lateral operation is the more favoured where cutting is necessary. I saw one child, a few months old, in whom a stone had been crushed and removed the previous day. The child seemed perfectly well and very happy.

In Public Health, Surgeon-Lieut.-Colonel King gave the address as president, and various subjects of special Indian importance were ably dealt with. Vaccination—and rightly, too—held a prominent place, and the terrible number of natives pitted with smallpox, and suffering from its sequelae, show the urgent need of its compulsory performance. In this, as in other matters, the religious prejudices of the people have to be considered, and progress seems terribly slow to the enthusiasts of English Health and other Societies.

In military medicine and surgery, Surgeon-Colonel Gore presided, and the three most important topics from the army medical officer's standpoint were thoroughly ventilated, viz., treatment of gun-shot wounds, enteric fever, and venereal diseases.

In obstetrics, Surgeon-Major Dimmock took as his subject for his presidential address in his section, the forms of puerperal fever in India. After a high tribute to the Countess of Dufferin's work in establishing women's hospitals in India, he considered the effects of race and tropical climate, and the particular forms of puerperal fever associated with quotidian, tertian and quartan agues and remittent fevers, and also those of dysenteric, thermic, and unknown types, and concluded with an appeal for the formation of an obstetrical society for India.

Considerable attention in this section was given to the subject of biliary cirrhosis in children—a form of liver atrophy, which has been only noticed the last few years, and the fatality of which is of most serious moment. It has a predilection for male children, but so far has scarcely been seen in children of European parents.

The social aspects of the congress were ably carried out. The President had a series of dinners, and many of the leading medicos freely entertained; and native parties were given at Chatterjee's gardens by Dr. Nath Gluse, and by Dr. Morkerjee at his own house. A trip to the Botanical Gardens was organised by river steamer, and one up the Hooghly to the Palta water-works. On two evenings there were special admissions to the Star and Corinthian Theatres, for those who cared to go, whilst the Arsenal and Zoological Gardens were also visited. On Friday evening the President gave a most enjoyable conversation at the Town Hall, at which the Viceroy was present. The Indian Medical Service had a dinner at the Dalhousie Institute on the Saturday night. About 100 members sat down, and the delegates from England, Scotland, Pondicherry, Ceylon, and South Australia, with representatives of the Army Medical Service, were present as guests. It

was one of the most enjoyable public dinners ever held. The catering was excellent, and the songs by different members showed the high amount of musical talent in the service, whilst the speeches were short and brilliant. It formed a most successful ending to a successful week of work, and the enthusiasm of the service relieved itself by chairing the most popular president (Surgeon Colonel Harvey) around the room, after the singing of "Auld Lang Syne" and "God Save the Queen."

The morning of the last day was occupied by an address from Dr. Harvey, the President, on the need of a Pasteur Institute for India, in which he combated in brilliant style the anti-vissectionists. Mr. Hart gave an interesting address on the importance of the Indian Government affording more facilities for work (original) and research, picturing in vivid colours the present multifarious duties which the Civil Surgeon has to do—duties which were equal to those required of four or five experts in other countries. He also referred to the mischief done by the repeal of the Cantonment Act (Contagious Diseases), and protested against the proposed alteration, which throws a slur on the Indian Medical Service. Then followed various votes of thanks, &c., and the fixing of the date for the next Congress.

Although a great success, the same paucity of discussion was seen at the Calcutta Congress as at our own. In talking over this with Dr. Thornhill, one of the Ceylon delegates, I found he had formulated several suggestions for future occasions. His suggestions were practically these:—That all papers should be in the hands of the Executive Committee at least two, if not three months prior to the date of assembly. The committee would decide which should be read and which not. The papers should be printed before the time for Congress, and any member, for a small fee, should get the papers on the subjects in which he was interested, by applying for them. Members would thus come down prepared to discuss the points raised by the writers. For instance, some members would be specially interested in cataract, some in pneumonia, tubercle, &c. Those interested in the one might not care about the other. The payment of an extra 1s. or 2s. would enable them to have the papers on the subject they were interested in, which they could look over previous to the section meeting; thus discussion would be favoured, and better results obtained. Personally, I am convinced that Dr. Thornhill is on the right track, and would commend his suggestions to the committees of future Congresses.

On board the R.M.S. "Caledonia,"

Indian Ocean, January 16, 1895.

NEW SOUTH WALES MEDICAL UNION.

THE above Union has now completed the second year of its existence, with over 120 members. The object of the Union—to render assistance to any member who may be threatened with or involved in any action at law or prosecution arising out of the practice of his profession—appeals to every qualified medical practitioner in the colony. The third year is now beginning, and it is hoped that every member of the profession, who has not done so already, will send in his name to the joint honorary secretaries, Box 557 G.P.O., Sydney, from whom all information may be obtained. Dr. F. H. Quail is the present chairman; Dr. Crago, hon. treasurer; and Drs. Jarvie Hood and G. L. Mullins, hon. secretaries. The annual subscription is one guinea, and there is no entrance fee.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary of their branch in Brisbane.

All communications intended for the Editors may be addressed direct to "The Editors, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors, Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

All business communications and remittances should be addressed to Mr. L. Bruoh, Medical Publisher, 13 Castlereagh-st, Sydney. Telephone No. 1770.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, MARCH 15, 1895.

EDITORIALS.

TUBERCULAR DISEASE.

ALL lovers of their kind will be glad to see the spread of interest in the great question of tubercular disease. A disease that in one form or other is the greatest single cause of death in all civilised lands certainly deserves all the attention that can be devoted to it. Indeed, it is from this quarter (according to Sir Lyon Playfair), if from any, that may come the extinction of our species.

For the discovery of the specific cause of this omnipresent malady, we are almost entirely indebted to the genius of Koch, and to Koch also and his followers we largely owe our recognition of dried tubercular sputum as one of the main means of infection. To Baug, Bollinger, Nocar, and other continental observers, we similarly owe the recognition of that equally great mode of infection, tuberculous milk and meat, so suggestively illustrated by Sims Woodhead in his recent lecture. But whilst the settlement of the bacillary aspect of the disease has thus been mainly the outcome of continental work, it is to English common sense and clinical acumen that we are mainly indebted for the evidence that,

whilst the germ is thus necessary for the origination of the disease, its extent and rate of progress are conditioned almost absolutely by the constitutional resisting power. To such an extent, indeed, is this so, that tubercular disease may be defined as the product of the growth of the tubercle bacillus in a suitable human culture medium.

Any line of treatment, therefore, which aims at the extinction of this great national scourge must seek not only to prevent the entrance of the bacillus into the human system, but also to aid the natural invulnerability by all means in its power. Too often in practice we find one of these desiderata sacrificed to the other.

From the bacillary point of view, tubercular disease is generally acquired, and rarely hereditary. The bacilli being very tenacious of life and widely distributed—growing, indeed, as has lately been shown, outside as well as inside the bodies of warm-blooded animals—infection is only too possible both through ingestion and through respiration. Respiratory infection becomes thus almost certain whenever people are brought into contact with tuberculous people or tuberculous surroundings. How enormous the number of bacilli thus let loose into the atmosphere may be gathered from the careful investigations made some years ago into the cases of three patients at the St. John Hopkins University, wherein it was calculated that the twenty-four hours' sputum contained from 400 to 4,000 millions of bacilli. Even if, as Pfeiffer maintains, many of these are already dead, still sufficient are left alive to work endless mischief. But though neglect to promptly destroy infected sputum is thus the cause of many, perhaps most cases of tubercular phthisis, how many patients, for want of a little knowledge, continue to infect their surroundings, and imperil their relatives and friends? And, stranger still, how many medical men continue to treat cases of phthisis without at any time giving instructions upon this all-important point? In days not far distant, it is safe to predict that such neglect will carry with it manslaughter. We are glad to see, therefore, that in many places in England and America they are following the plan of notifying cases of phthisis, and that the hygiene section of the recent Brisbane Congress recommended the circulation of written instructions amongst all consumptive persons and their families. Such an educational sheet, indeed, has been already issued by the Australian Health Society, and may be obtained upon application to 49 Elizabeth-street, Melbourne.

Similarly, in respect to tuberculous milk and meat, there is abundant evidence to show that

Australian stock are far from being free from tubercular disease. Almost all other civilised parts of the world are vying with each other in weeding out infected animals by efficient inspection and the tuberculin test. It is gratifying, therefore, to find that the Australian colonies are awakening to their responsibilities in the matter. There is now some prospect that before long we shall be free from the reproach and danger of having no scientific oversight of our abattoirs and dairies. Upon this point the conference of stock inspectors is almost as emphatic as the Brisbane Congress. Trade considerations, indeed, are beginning to force hands that would, perhaps, never have been raised upon the ground of health. It is being dimly recognised that the very sale of Australian butter—one of our main panaceas against colonial depression—will, ere long, depend upon the proven purity of the milk used in its manufacture, and that Australia must take the precautions which are found advisable in Denmark and other parts. Similarly, it is only a question of time for the Australian export trade in live and frozen meat to be placed, like Canada, under imperial inspection at our local expense, and the tuberculous element eliminated at our local cost. Even new and promising industries seem threatened, for we find many pigs rapidly dying throughout Victoria from acute tubercular disease, traceable, apparently, to the free use of milk obtained from the creameries.

As practising physicians, however, we have to deal even more with the constitutional factor. With an ever-increasing conviction that ill-health is necessary for the extension of tubercular mischief, we recognise that the best way to avoid phthisis is to maintain the personal health by all the means in our power. We see the necessity of avoiding, so far as possible, all sources of excess, privation, and depression, and the value of special care in the case of the constitutionally weak. What we call tonic treatment is still subsidiary to this attention to air, food, occupation, and surroundings. For some specific agent, which shall antagonise the bacillus and its products, we must look beyond these general remedial agents to some modification of tuberculin, or some product of serum therapy. It seems, indeed, as if the question must be one of bacteriological chemistry. Even, however, when we shall have this specific antidote, we must remember the complexity of the infection, and the tendencies to recurrence; for it seems probable that, though the tubercle bacillus starts the disease, its subsequent extension and termination are largely due to the working of various cocci, against which some further antagonist is required. And even though we do finally succeed in

establishing immunity, which is possibly only a question of time, there still remains unsettled the duration of that invulnerability, and the probability that nothing short of continued and expert attention will secure its permanence. After all, we are driven back upon the laws of health. Obey them, and if inheritance permits, health—the healthy existence which is the appropriate setting of living things—is ours. Disobey these laws, either from ignorance or revolt, and disease, in one of its protean forms, inevitably follows. And expedients—even the scientific expedients of this nineteenth century of ours—can never counterbalance the continued operation of causes. Prevention remains better than cure.

ADVERTISING BY MEDICAL MEN.

WE again feel ourselves obliged to reproduce a few examples, culled from country newspapers and other sources, of advertisements issued through various channels by members of the profession. While we recognise that, with respect to the question of advertising in general, many of our brethren, loyal to the best interests and traditions of the profession, may in country districts find themselves so circumstanced as to render it a question apparently difficult of satisfactory solution, we feel sure that all right-thinking and self-respecting men will see in the specimens from time to time reprinted in our columns nothing but what is worthy of the strongest condemnation.

In certain of the sparsely-populated and remote parts of these colonies the conditions of life and of practice differ, no doubt, vastly from those which generally obtain both here in Australia and in that old country where the usages of professional life have grown into wise and beneficent rules for the guidance of us all; and we must here and there be lenient in our judgment of procedures which, under more ordinary circumstances, we unhesitatingly condemn. Some medical man, for instance, may have within the remote district served by him several small townships, and a wide country round about him separated by long distances and only workable by periodical visits. The convenience and even the well-being of the scattered population may, under these circumstances, be served by the insertion of an advertisement stating the days and hours of each periodical visit. But, while an advertisement to this end might be excusable in the environments just alluded to, like advertisements in the case of any of the larger townships

and cities of our colonies could only be regarded as a pernicious breach of those rules of propriety and of conduct which have been formulated for the mutual advantage of the members of the profession as a body.

While, therefore, in certain sets of circumstances outside the ordinary, we may well be cautious and lenient in our judgment as to facts of advertising, it behoves us to look with a jealous eye upon anything and everything approaching to the advertising "puff." One important branch, at least, of the British Association amongst us has, in its by-laws, the admirable rule: "No member shall be a party to the appearance of a notice of his life in the public press, or insert any advertisement beyond an announcement of change of address, or commencement or resumption of practice."

It would be well that this or some similar by-law should be adopted by all the branches, and that such instances as have been alluded to above be regarded as exceptions, which are not to be held as weakening, but rather as strengthening, the rule in its general application. A definite and uniform effort should be made by the federated branches to suppress this growing evil, which dismembers the profession, robs it of its proper dignity, and reduces the members of it who are ill-advised enough to indulge in such practices to the level of the quack and charlatan, and renders the profession an object for the gibe and sneers of those who are on the outlook for the weaknesses of the profession.

We append a few specimens of objectionable advertisements from Queensland and Victorian country papers:—

DR. THOMAS SCOTT

AND

DR. J. A. NEPTUNE SCOTT,

HAVE DECIDED TO

**REDUCE THEIR CONSULTATION FEE TO
HALF-A-GUINEA
DURING THE PRESENT DISTRESSING DEPRESSION.**

Ear and Eye.—Free Advice on Thursday Afternoon.

DR. J. W. O'BRIEN,

M.A., MELB., B.A., M.B., B.CH.

State Science Trin. Col. Dublin,

**Fellow Licentiate & Senior Surgical Gold Medalist,
Ireland, L. Mid. Rtd. Hos. Dublin.**

**Special Certificate Diseases of Women.
(Late of 102 Collins-street, Melbourne),**

HAVING SECURED

**MR. FRANK ALLEN'S RESIDENCE,
KOROIT-STREET**

(Opposite Ellerslie College),

MAY BE CONSULTED

TO 12 NOON, 2 TO 5 P.M., 7 TO 8 P.M.

DR. BOWSER

HAS BEGUN PRACTICE at the Residence of R. Harpur, Esq., Gladstone.

Thirty-six Years' Experience in Europe, India, Africa, and Australasia.

SPECIALTIES: Midwifery, and Diseases incidental to Women, Children, and the Tropics.

THE GAZETTE FUND.

ONE of the most pleasing and significant incidents in connection with the purchase in the interests of the Association of the *Gazette* has been the growth in connection with the New South Wales branch of the fund. As was pointed out by the hon. secretary at the December meeting, in moving the incorporation of the Branch, "the fund has a value beyond that of its component pounds, shillings and pence. It has a special value as being a substantial and undeniable expression of the genuine sympathy and interest felt in our branch and its work, by so large a number of members." It is gratifying to find that such sympathy and interest is still finding expression in this useful fashion. The fund is still growing from week to week, and the Council of the New South Wales branch have apparently good grounds for hoping that many members who have not as yet found an occasion of doing so may yet avail themselves of the opportunity which is still open to them of thus expressing their appreciation of the benefits which already have, and which in the future assuredly will be enjoyed by every member of the Branch by the action of the Council—an action only rendered possible by the generosity of those members who have so liberally given for the common good. Not least among these benefits, it must be remembered, is the fact that every member is now supplied with the *Gazette* free of cost.

DR. SCOTT, of Ballarat, contributes an interesting case of cocaine poisoning to this number of the *Gazette*. To those having experience of such cases, the downward course has often been traced: alcohol—morphia—cocaine. Very often before cocaine has been used as a last resource, alcohol and morphia have been alternately used—often simultaneously. The unhappy victim of this deadly infatuation finally turns to cocaine in the vain hope of retrieving himself and getting rid of that terrible depression and agonising feeling that attends the waking of the opium-eater and the morphia-maniac. The nervous excitation and subsequent depression following thereon has, to some constitutions, a greater fascination than the results of alcohol and morphia. A victim to this craze, who, by

the exercise of the power of his will, subsequently recovered, gave the writer of these notes a graphic description of some of his symptoms. He took, hypodermically, from sixteen to twenty grains a-day in grain doses, and subsequently became the victim of hallucinations. He would go out riding at midnight, and thought that he was followed by phantoms, and on some occasions narrowly escaped catastrophe through his endeavours to flee from them. On one occasion he visited a burial-ground, and had a very lengthy conversation with a friend whom he conjured from the grave.

THE TREATMENT OF DIPHTHERIA BY MEANS OF ANTI-TOXIN SERUM.

WE wish to bring under the notice of the profession the importance of the records of all cases of diphtheria treated by this method being published in a uniform fashion. Dr. Frank Tidswell has suggested that such records should, whenever forwarded, be published in the *Gazette*, and the form of return in use by Dr. Clubbe at the Diphtheria Ward of the Children's Hospital, Sydney, may be had on application to the house surgeon. We shall be happy to publish such records as may be furnished by members of the profession, and we would urge that all gentlemen using the remedy should aid in this useful method of collecting information, and render it available to all.

LETTERS TO THE EDITORS.

THE NEXT ANNUAL MEETING OF THE B.M.A.

THE following letter, from Dr. J. Russell Reynolds, has been received by the secretaries of the various branches of the B.M.A. in Australasia:—

38 Grosvenor-street, London, W.

November 28, 1894.

Dear Sir,—The next meeting of the British Medical Association will be held in London on July 30th, to August 2nd, 1895, inclusive.

Our last assembly in the metropolis was twenty-two years ago, and it has been felt very strongly that during those eventful years so much progress has been made in the methods of biology and medical research, as well as in the arrangements for their conduct; and further, that there have arisen such new and important institutions, connected both directly and indirectly with our profession, that the centre of our association would be the most fitting place in which to meet. This is true in relation to our provincial members, and still more so in relation to those who are members of our society, and residing in foreign countries, and in our colonies.

I shall be obliged by your sending me the names and addresses of those who propose to attend, and assure you of their hearty personal introduction to the meetings, and of all the kindly hospitality that our vast metropolitan meeting of the association can afford.

I am, dear sir, yours very truly,

J. RUSSELL REYNOLDS.

DO THE SILESIA NS EAT DOGS' FLESH?

(To the Editors of The Australasian Medical Gazette.)

GENTLEMEN,—Dr. Gardner, of Melbourne, in last issue of the *Gazette*, believes that he is quoting three different authorities in support of his statement—that the poorer classes in Germany, or at least in Silesia are habitually eating dog's flesh; but if one analyze, his quotations the three authorities are reduced to one: Lebert.

The first authority quoted is an edition (13 years old) of the "Nouveau Dictionnaire de Médecine, etc," a cyclopædia, in which Lebert is made responsible for speaking of "*l'habitude très-répandue parmi les classes pauvres de ce pays (Silecie) de se nourrir de la viande du chien.*" "It is surely impossible to imagine a more positive statement as to the eating of dogs' flesh!" exclaims Dr. Gardner. Surely impossible! And it seems almost a pity that the very editors of the "Nouveau Dictionnaire" evidently did not share in this belief, as they have carefully qualified their own statement with the addition "*s'il faut en croire Lebert.*"

Ebstein apparently is Dr. Gardner's second authority, and Ebstein writes in v. Ziemssen's "Cyclopædia of the Practice of Medicine": "With regard to Silesia in particular, Lebert attributes the frequency of the echinococci, undoubtedly with reason, to the consumption of dogs' meat by the poorer classes." So we find that both cyclopædistas have originally taken their wisdom from Lebert, while Ebstein, to say something on his own account, simply adds that Lebert must have undoubtedly reason for his statement. Who this Lebert is, and where his statement originally appeared, we are not being told, but probably it is the great pathologist, whose excellent "*Traité d'anatomie pathologique*" appeared some 35 years ago. I had no opportunity to look it up here. But it is easy to see how the mistake occurred. The Parisian Academician Lebert, although a native of the Silesian metropolis, did not know that the poorer class of German agriculturists playfully call "dog's flesh" the domestic goat which they are in the habit of consuming. In a similar way a Melbourne scientist might possibly inform the outside public that horseflesh and venison is the principal nourishment of the Central-Australians, not knowing that bush-people, when they speak of "salt horse," mean corned beef, or that they, when speaking of "stags," are referring to the ancient rams, unfit for further stud duties, which in recent years are being largely consumed on sheep-stations in the interior.

However, Dr. Gardner is well aware of the tendency of cyclopædistas "to go on repeating a statement, simply because it has once been made!" and he can easily guard against this, as he is enabled to bring the evidence of a third witness, entirely "free from scientific prejudices"—Dr. Marten's German coachman, who, on being interviewed by his master, said: "Yes, the Gipsies in Germany kill their dog as we would a sheep, and have roast dog for dinner."

Here we must first of all regret that Dr. Marten's coachman did not speak of the Germans at all. Dr. Marten's coachman spoke, on Dr. Gardner's own evidence, of "*The Gipsies in Germany.*" But Dr. Gardner himself admits that "this particular Teuton" "was not a learned one;" and so we may pardon the Teuton when he did not point out to the doctor that Gipsies and Germans, or Gipsies and Silesians, are not identical words. The Gipsies are a homeless alien tribe, roving in small numbers all over the European continent, and a possible dog-eating habit of theirs can have no more to do with Silesian hydatids than, say, the smoking of

opium by the Sydney George-street Chinaman can be made responsible for the mysterious "Barcoo rot" in the Far West.

I make these remarks, not because I thought Dr. Gardner's imputations would be discreditable to the Silesians, or to the whole Fatherland; on the contrary, if the Silesians had no other meat, such a freedom of prejudice would be as much to their credit as it is to the credit of a number of Australian station-hands when they cheerfully make their meal of "stag" twenty-one times a week. But this dog-eating habit, to the best of my knowledge, does not exist in Silesia to any extent worth mentioning. Amongst the poorer classes of *all* nations, I believe, occasionally an unprejudiced odd family can be found, whose members are not above eating dogs' flesh whenever they can get hold of a fat animal, *not their own*; and as Silesia is rather a poor, but thickly-populated country, *possibly* the percentage of dog-eaters there might be a trifle higher than it is on other parts of the globe; but to speak of this as of a *habit* of the population appears absurd. During nearly thirty years residence in Germany I have never heard of this alleged dog-eating. I must admit that I am not a Silesian, but Mr. L. Bruck, of Sydney, the publisher of this journal, who is a native of the Riesengebirge—one of the poorest districts of Silesia—assures me most emphatically that he also has never heard of a single case of dog-eating in his native province.

Whether Dr. Marten's coachman is correct about the Gipsies eating dog's flesh, I am not prepared to say; one knows but little of their habits. But, even if they do eat dogs, I fail to see how this can have any influence on the prevalence of hydatids. For we have the authority of Dr. Marten's coachman that the dog-eaters "*kill* their dog." If they were eating the dog alive, with skin and intestines, it might expose them to some risk. Or if the dogs were in a half wild state and had to be shot, infection would be possible, when a shot through the abdomen would soil the meat with the contents of the intestines. But the Gipsies do not shoot the dogs; "they kill their dogs as we would a sheep," so Dr. Marten's coachman says. Killing the dog "as we would a sheep," I suppose, means they cut the dog's throat, and, after cleaning it, they throw the uninjured intestines away. From such a *dead* dog one could not, I believe, contract hydatid disease, if one were to eat it *raw*. But the Gipsies do not even eat it *raw*. They roast it. "They have roast dog for dinner," Dr. Marten's coachman says so.

Against the other remarks of Dr. Gardner I have not a word to say; I should like to leave that to the writer of the article.

I am, &c., J. COLPE, M.D.
Sydney 21st February, 1895.

HYDATIDS.

(To the Editors of the Australasian Medical Gazette.)

SIRS,—Mr. Fitzpatrick's "Notes of some hydatid cases," published in the December number, challenge criticism, for the writer closes with flippant remarks and expresses his contempt for the record of technical details. Perhaps you will allow me to direct attention to some of the more remarkable statements in "the notes," which appear to have escaped editorial revision.

In case No. 1, hydatid of the neck, it would appear that "the entire fibrous capsule was removed" by dissection, with considerable hemorrhage. An incision into the fibrous capsule should have allowed easy evacu-

ation of the hydatid cyst, which by the way is not mentioned; and the case reads more like the record of an extirpation of hydrocele of the neck than hydatid. In case No. 2, there is no mention of the parasite, and in neither is there any account of the cyst contents. In case No. 3, at least three quarts of semipurulent fluid were evacuated through a large cannula plunged into a tumour in the right lumbar region. No cysts or cyst remains were found. There is no mention of hooklets, nor of microscopic examination of the fluid, but the diagnosis of hydatid was made solely on the "previous history of hydatid." The closing of the sinus leading into a cavity which had contained three quarts of semipurulent fluid in *three days*, and the occurrence of hæmaturia afterwards are, to say the least, remarkable incidents in the treatment of hepatic hydatid.

In the case No. 3, we are told that placing the patient *prone*, a large projecting tumour filled the umbilical region; so it is probable that the *prone* position of the subject accounts for "an incision four inches long being made from three inches above the umbilicus to two below it in the median line." There is no record of the parasite having been removed; and although *mild perchloride wash* was first used, one-in-thirty carbolic water was thrown daily into the large abdominal cyst. In case No. 5 an abdominal incision is said to have been made, the patient lying *prone*, and an astounding method of dealing with adherent peritoneum is mentioned without comment, though the incident of "most of those present" running out into the fresh air on smelling the odour of the cyst contents is recorded. How, in case No. 6, (John H.), an incision below the ribs down to an abdominal cyst avoided the peritoneum and divided an intercostal artery, is inexplicable.

In case No. 7, it is alleged that a cyst, emptied of ten ounces and not collapsed—*which is unusual*—was withdrawn almost intact through a hole in the skull, the diameter of a shilling. The notes as a whole are strange reading, and more likely, if noticed, to amuse the Germans than Dr. Gardner's statement as to the consumption of dog's flesh by the poorer classes in some parts of the German Empire.

I am, Sir, yours truly,
B. FOULTON.

Adelaide, January 30.

[THE present editors of this journal are not responsible for any articles inserted before January this year.—EDRS. A.M.G.]

THE INDEX MEDICUS.

(To the Editors of The Australasian Medical Gazette.)

DEAR DOCTORS,—I have learned that the *Index Medicus* will cease to be published with the February number, owing to lack of support, and the fact that a large number of its subscribers are delinquent, unless an effort is made to continue it.

The value of this publication to those who do any work at all in connection with medical literature is so great that I take the liberty of writing to you to express the hope that you will not only become subscribers, but will urge others of your professional friends to do so.

It is particularly necessary that the *Index Medicus* should be continued, owing to the fact that after the completion of the supplementary volume of the index catalogue of the Surgeon-General's library, there will be no record of contemporary medical literature, and he who desires to keep pace with it, or who wishes to study a particular subject will have to resort to the

laborious task of seeking in various journals that which he desires if the publication of the *Index Medicus* ceases.

It will be possible to continue the *Index Medicus* if 500 new subscribers are obtained. The subscription price is 10dol. per annum, which should be sent to Mr. G. S. Davis, publisher of the *Index Medicus*, Box 470 Detroit, Mich., or to me.

As the *Index Medicus* can never be made a success from a commercial point of view, because of the peculiar scope of its work, I have no hesitancy in making you acquainted with these facts, and I earnestly hope that you will insert a notice emphasizing the importance of this matter in the columns of your valuable journal.

Yours truly,

H. A. HARE.

222 South Fifteenth-street,
Philadelphia, Jan. 1, 1895.

THE KLEBS-LOEFFLER BACILLUS.—A CORRECTION.

(To the Editors of The Australian Medical Gazette.)

DEAR SIRS,—In your issue of January 15th I am reported to have asked: "First, whether it was easy and certain to find the diphtheritic membrane; and secondly, whether or not a condition known as herpes of the throat did not simulate diphtheria?"

What I actually did say was as follows: "Was it easy to demonstrate the Klebs-Loeffler bacillus? Was it common for cases, actually the subject of true diphtheria, when the faucial membrane was examined by competent hands, to show no Klebs-Loeffler bacillus?" I also mentioned the fact that in cases certainly tubercular, the examination of the sputum sometimes failed to demonstrate the tubercle bacillus. Secondly, I asked Dr. Clubbe "if he had noticed the close simulation of a diphtheritic membrane presented by the condition of the fauces in cases of herpes of the throat after the vesicles had matured and coalesced?"

I shall esteem it a courtesy if you will give the correction the same publicity which you have accorded to the erroneous report.—Yours truly,

R. SCOT SKIRVING.

221 Elizabeth-street, Sydney, February 15.

THE United Annual Dinner of the various Medical Societies of New South Wales, which was inaugurated last year, will be held about the end of May, Dr. Wood, of Ashfield, being again secretary.

TEMPORARY EXCHANGE OF PRACTICES.—Incumbent of a practice in Orange is desirous of exchanging practices for a fortnight from beginning of April, with practitioner in Sydney or suburbs. Apply to Mr. Bruck, A.M.G. office, Sydney.

FOR SALE, MONOCULAR MICROSCOPE (Swift's), with condenser, five eye pieces (by Tolles), eight objectives (by Zeiss, Tolles, Orouch and Seibert), micrometers, camera lucida, &c., &c., with 500 mounted slides in cabinet, offered for £50 cash (original cost £149). Apply to Mr. Hy. Sharp, care of A.M.G. office, 13 Castlereagh-street, Sydney.

GAZETTE FUND.

(Contributions to this Fund are still being received.)

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In addition, various amounts of less than £1 will be credited to the fund by the kindness of members who had already paid annual subscriptions to the *Gazette* in advance. The total amount of these, with the names of the donors, will be published in our next issue.

L. H. RUXTABLE, Hon. Sec.

REVIEWS.

THE DISORDERS OF SPEECH. By John Wyllie, M.D., F.R.C.P., Ed., Physician to the Royal Infirmary, Edinburgh; Lecturer on the Practice of Medicine and on Clinical Medicine, Edinburgh. Edinburgh: Oliver and Boyd, Tweeddale-court.

THIS work is composed of a series of articles contributed to the *Edinburgh Medical Journal* from 1891 to 1894, together with the author's inaugural thesis (1865) on the physiology of the larynx; the reason for reprinting which is not very obvious, as the subject is elaborately treated in all modern text-books on anatomy and physiology.

The book is divided into three parts, the first part dealing with the functional disorders of the vocal mechanism, the second with the development of speech, and developmental derangements, and the third with speech in its relations to diseases of the nervous system. The author must be a clinician of great experience, and has succeeded in investing a subject that at first sight would appear to be dry and ungrateful with the utmost interest. It would hardly occur to the average medical reader, that there was more to be learnt about the disorders of speech than is generally contained in works on nervous diseases, where, perhaps, one chapter is devoted to aphasia, as the most frequently encountered symptom of cerebral disease in relation to speech; but in this work of 494 pages, there are no less than seven chapters devoted to the consideration of this important symptom alone. The subject of stammering, and its treatment, is exhaustively gone into. In that respect the work will prove of great value to general practitioners, who are so frequently consulted about this very affection, and have absolutely no advice to offer as to its treatment, or prevention, beyond commonplaces that every layman knows himself. The article on "The Troubles of Professional Voice-users" is very well written, and ought to prove of great value to throat-specialists. In fact, the whole work is a valuable addition to medical literature, which will no doubt be thoroughly appreciated, both for its originality as well as its literary worth, by those of our readers who make frequent additions to their libraries.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR 1893 (F. J. Waldo, M.A., MD., Cantab., D.P.H. Royal Colleges of Physicians and Surgeons, M.R.C.S.E., etc.), UPON THE SANITARY CONDITION OF THE PARISH OF ST. GEORGE THE MARTYR, SOUTHWARK, LONDON. Printed by order of the Vestry, Southwark, 1894.

The valuable pamphlet sent us for notice by Dr. Waldo, consists of 90 pages and several maps, bristling with statistics and information relating thereto, which it must have cost the M.O.H. lots of valuable time to compile for printing. The Report deals with one of the poorest and most densely-populated districts in the whole of London, which covers 284,875 acres, with about 20 miles of roads and streets, and some 7,000 houses, with 59,724 inhabitants, and a death-rate of 27·6 per 1,000. Dr. Waldo considers that there were 878 unnecessary deaths in St. George's, Southwark, which were due to—(1) deaths in public institutions, unequally distributed among the various sub-districts; (2) density of population; (3) poverty, especially in the Borough-road; (4) absence of open-air spaces. This parish has an excessive death-rate from zymotic diseases, and the M.O.H. traces the cause of their prevalence to the Blackfriars' penny-shelter, established by the Salvation Army, where there is only 90 feet of

cubic space per man, whilst in hospitals it goes up to 1,200 feet per bed. It is advocated that this and other shelters be placed under the protective provisions of the Common Lodging-House Acts. Altogether, this Report is very useful, and ought to prove of service to epidemiologists and others connected with the sanitary services of Great Britain and the colonies.

THE EVOLUTION OF THE DISEASES OF WOMEN: By W. Balls-Headley, M.A., M.D., Cantab., F.R.C.P., London. Smith, Elder and Co., London. Melbourne and Sydney: George Robertson. Price 16s.; by post 17s.

THIS is the most important medical work which has so far proceeded from the pen of an Australian physician. While it does not pretend to be a complete text-book of gynaecology, yet inasmuch as the sections on treatment are full and valuable, it must be held to cover a much wider field than might be inferred from its title. Giving, as it were, a bird's-eye view of the causation of disease in women, and characterised by an originality and philosophic breadth of view not to be found in an equal degree in any other gynaecology with which we are acquainted, it is in our opinion calculated to give the student a clearer insight into, perhaps, the most difficult branch of medical practice than any other single work on the subject. The first chapters are devoted to a consideration of the sexual relations in primitive people, and the influences of civilisation on these relations.

It is shown that while in the animal kingdom and in primitive communities every female has her mate, in Victoria at the present time every other woman between twenty and thirty is unmarried. Similar conditions prevail more or less in all European countries, and the author rightly attributes to this absence of seasonable marriage a large proportion of gynaecological disease. The other evil influences, such as excessive brain-work, long-continued standing or bending, downward pressure by tight stays and heavy petticoats, distended rectum and bladder, tea-drinking, &c., &c., are all touched upon in an interesting way. The interactions of different causes are clearly shown, and the reader has forcibly brought home to him why there is so much truth in the witty Frenchman's definition of woman, "*La Femme est une malade*."

Although we have seen much evil resulting from the improper use of pessaries, and quite agree with the writer that their use in cases of prolapsed and adherent appendages and endometritis with granular os, is to be deprecated, yet we cannot concur in his uncompromising condemnation, nor in the opinion that Kimmel's anterior kolporrhaphy will suffice to maintain the uterus in normal position.

With all respect to Dr. Balls-Headley, we must differ from his statement that Sims' speculum, and the lateral semi-prone position are best for either ordinary examination or operative work. The modified Neubauer's speculum, used in the Dorsal position, enables one to dispense with the assistance required with the Sims', and to use the curette and uterine douche in abortion cases with the greatest ease. For operative work, such as trachelorrhaphy, Simons' specula and the dorsal position will be found easier and better by anyone who will impartially try both, although Dr. Balls-Headley's skill and experience doubtless enables him readily to overcome the difficulties inherent in the method which he advocates.

The get-up of the book is all that can be desired, the style is excellent, and the illustrations are numerous and instructive. The work should be studied by all who have to deal with the diseases peculiar to women.

A MONOGRAPH ON DISEASES OF THE BREAST: THEIR PATHOLOGY AND TREATMENT, WITH SPECIAL REFERENCE TO CANCER. By W. Roger Williams, F.R.C.S., late Surgeon Western General Dispensary, and Surgical Registrar Middlesex Hospital. London: John Bale and Sons, 87-89 Great Titchfield-street, Oxford-street, W. 1894.

THE author has made the attempt, and most successfully withal be it said, to give the profession a succinct resumé of all that has been done and recorded in relation to diseases of the breast up to the present. No similar essay has ever been published, and the work is so thoroughly scientific and cosmopolitan, in that the literature of the whole earth has been ransacked to make the records as accurate as possible, that there will be no necessity for another for many years to come, possibly not until next century. The author took the wise course of selecting a subject that has not been handled *in extenso* by English writers since the time of Astley Cooper. His method of dealing with the subject on the continental system stamps the book with the impress of impartiality, renders it easy to read, and facilitates reference.

The chapters on cancer alone cover 395 pages, as might have been anticipated, and include a critical survey of the present positions in regard to the pathology and treatment of this dire affection of the breast. In relation to the theory "that there *must* be a specific cancer microbe," the author says (p. 144):—"I should like to know why, since we can so well account for all of the phenomena of the disease without it. . . . The microbe of cancer has not yet been discovered, because in all probability it does not exist." We need hardly add that that is our firm conviction also. The references in the text are very numerous, as a matter of course, as the literature of the subject is scattered in scrap form all through the medical journals of three continents, to collect and analyse which must have been a colossal undertaking. We consider that Dr. Williams has accomplished in a classical manner the compilation of a monograph that was urgently needed in the English language, and we have much pleasure in recommending it to our readers as a standard work of reference which no surgeon ought to be without. The author's method of operation for cancer is original, and well worthy of imitation, although, as he says himself, "most modern thorough operations have much in common." The volume is handsomely bound, printed on good paper, fairly illustrated where required, and moderate in price. We have seldom the opportunity of reviewing a work with as much pleasure as this has given us.

THE February issue of the *Intercolonial Quarterly Journal of Medicine and Surgery* contains a series of interesting original articles and clinical records. Among the former may be noted the paper on "Operative Treatment of Perforation in Typhoid," by Dr. F. E. Hare, of Charters Towers (Q.), and a suggestive paper by Dr. R. Hamilton-Russell, F.R.C.S., of Melbourne, on "The Future Treatment of Hydatid Disease," while, amongst the latter, Dr. Poulton's "Granuloma Fungoides," and "A Case of Concurrent Scarlet and Enteric Fever," by Dr. E. A. Mackay, of Melbourne, will be read with interest. The "Periscope" and the "Reviews" deal with a considerable amount of important matter, clinical and literary, and the whole issue is admirably got up and illustrated.

CASSELL'S YEAR-BOOK OF TREATMENT, FOR 1895, has come to hand. Price 7s. 6d., by post 8s. L. Bruck, Medical Bookseller, Sydney.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during January to every 1,000 of the population was 2·65, and of deaths 1·27; 105 deaths or over 20 per cent. of the total deaths occurred in public institutions. The deaths of children under five years of age during the month were 266, or 49·44 per cent. of the total, 201 (37·86 per cent.) being under the age of 1 year. Four deaths of child-bearing women took place during the month, or 1 death of a woman to every 280 births recorded.

THE annual report of the P. A. Hospital, Sydney, for 1894, shows that during the past year 2,927 patients had been treated, as against 2,611 in 1893. Of these, 175 were inmates of the hospital on December 31, 1893, and of the 2,752 admitted during the year, 787 were cases of accident or urgency, 1,043 were received under Government vouchers, and 901 contributed more or less to the cost of their maintenance. The mean residence of the patients had been 27 days, as against 29 in 1893, and the rate of mortality had been 9·74, against 9·92. The attendance of outdoor and casualty cases had been 35,186, against 31,258 in 1893.

THE annual report of the Sydney Hospital for Sick Children shows that during the past year 441 patients were admitted to the general hospital, which, with the 45 remaining from the previous year, made a total of 486 patients treated. Of these, 389 were discharged cured or relieved; 16 were discharged incurable or unrelieved; 33 died; and on December 31 there were 50 remaining in hospital. In the diphtheria ward there had been 137 admitted making, with the six who were remaining from the previous year, a total of 143 patients treated. Of these, 73 were discharged cured; 68 died; and on December 31 there were two remaining in the wards. With regard to the out-patients, there had been 4,256 attendances by 1,319 patients.

A CONVALESCENT Home has been established at Picton, a well-known health resort on the southern railway line, 53 miles from Sydney, under the superintendence of Mrs. Burton, matron, assisted by a trained staff of nurses. The Home is now open to receive patients (medical or surgical), at a charge of from two to three guineas a week.

WE regret to have to record the death of Dr. James Struthers, M.D. (highest honours), 1888, M.B., Ch. M., 1883, Aberd., who died at Hill End, from eclamptic convulsions, on February 17th. The deceased gentleman arrived in New South Wales in August, 1890; soon after he settled at Bylstone, where he practised up to the beginning of February, when he was appointed medical officer of the Hill End Hospital. In the old country he held the positions of clinical assistant at Moorfields, and also at Blackfriars Skin Hospital, and that of assistant at the East London Fever Hospital.

JAMES PURVES WHITE, M.B., Melb., 1889, late of Muswellbrook, and formerly of Traralgon (Vic.), died from phthisis, at the residence of his father, the Rev. Dr. White, of Singleton, on the 9th February, aged 28 years.

DR. J. F. BARTLEY has been appointed a member of the Public School Board for Broken Hill.

DR. W. F. BASSETT has been appointed Deputy-Licensing Magistrate for Bathurst.

DR. W. PRITCHARD BASSETT has been unanimously elected Mayor of Bathurst.

DR. P. W. R. BOEHLKE, late of Balmain, has succeeded to Dr. Stokes' practice at Port Macquarie.

DR. T. W. W. BURGESS has commenced practice at Wagga; he has been elected medical officer of the local hospital.

DR. A. S. CASSIDY has settled at Adaminaby.

DR. W. T. CHENHALL has been appointed a member of the Public School Board for Marrickville.

DR. C. P. B. CLUBBE has removed from College-street to 195 Macquarie-street, Sydney.

DR. COLLINGWOOD, of Summer Hill, left by the R.M.S. "Miowers," for Vancouver, en route to England; he will be absent four or five months.

DR. E. A. DOMBRAIN, a Melbourne graduate, has started practice at Germanton.

DR. J. F. FLASHMAN, late of the Prince Alfred Hospital, has been appointed to the Hospital for the Insane, Parramatta.

DR. E. L. HICKEY, late of Parkes, has returned from his trip to England, and started practice at Nyngan.

DR. F. W. KANE has removed from Newcastle to Bourke.

DR. KIERNANDER has been appointed medical officer of the Narrandera Hospital at a salary of £40 a year. The position was offered to Dr. Mitchell, who would only accept it without pay, which proposal was declined by the committee.

DR. F. W. LANGTON has started practice at 47 Castlereagh-street, Redfern (Sydney).

DR. G. LENNHOFF has returned to Sydney from his trip to Europe, and resumed practice at the Glebe.

DR. J. B. MEREDITH has been re-elected Mayor of Raymond Terrace.

DR. BROOKE MOORE, of Bathurst, has been elected President of the local rifle club.

DR. G. E. RENNIE has been appointed Government Pathologist for the metropolitan district of Sydney.

DR. H. J. H. SCOTT, of Scone, has been elected Mayor for the third time.

DR. ALFRED SHEWEN, of Sydney, has been unanimously elected to the position of honorary consulting physician to the Prince Alfred Hospital, after having served for twelve years as honorary physician to the institution.

DR. G. P. STANLEY, of Blackheath, has succeeded to Dr. G. W. Baker's practice at Hill End.

DR. S. STEPHENS, late city medical referee of the A.M.P. Society, has started practice at Walcha.

BRIGADE SURGEON LT.-COL. WILLIAMS, P.M.O., of Sydney, has received six months leave of absence, to enable him to visit England on private business.

NEW ZEALAND.

THE proportion of deaths registered during January to every 1,000 of the population was 1.22 for Auckland and suburbs, 0.62 for Wellington with suburbs, 0.90 for Christchurch and suburbs, and 0.85 for Dunedin and suburbs. The total births in these four boroughs during January amounted to 422, against 295 in December. The deaths in January were 193, to which

males contributed 105, and females 88. Eighty-six of the deaths were of children under 5 years of age, being 44.56 per cent. of the whole number; 79 of these were under 1 year of age.

THE annual meeting of the New Zealand Medical Association was held in Christchurch, on Monday, March 4th, and succeeding days. Amongst other questions the following were considered:—(1.) Inter-colonial Medical Journal. (2.) Amalgamation with B.M.A. (3.) Medical Benevolent and defence Union. (4.) Appointment of permanent secretary. (5.) Degrees in Public Health. (6.) Report on Typhoid Fever. Dr. J. H. Murray-Aynsley, of the Christchurch Hospital, acted as Secretary to the Committee.

SIR JAMES HECTOR, M.D., Edin., K.C.M.G., F.R.S., of Wellington, has been re-elected Chancellor of the New Zealand University.

DR. R. W. LEWERS, late of the Melbourne Children's Hospital, has started practice at Levin, sixty miles from Wellington.

DR. T. HOPE LEWIS, of Auckland, returned by the R.M.S. "Rome" from his trip to England.

DR. C. J. SHIELDS, late of Victoria, has started practice at Hyde, seventy-five miles north-west of Dunedin.

SOUTH AUSTRALIA.

AT A meeting of the Central Board of Health held on February 14, the following motion was carried:—"That the question of federal quarantine be again referred to a meeting of representatives of the health authorities of the different colonies, with a view to determining whether any scheme can be devised which will meet the present requirements."

LEPROSY has broken out amongst the aborigines on the Alligator River, in the Northern Territory, and it is feared that, owing to their custom of inter-tribal marriage, the disease may spread throughout the race and hasten its extinction.

It is proposed to remove the hospital at Waukaringa to Petersburg.

DR. C. CORBIN, Junr., left Adelaide for London by the ship "Torrens."

DRS. A. M. CUDMORE, G. A. Fischer, A. Goode, and F. S. Hone, have been appointed resident medical officers at the Adelaide Hospital for the current year.

DR. W. J. GETTING has been appointed assistant health officer at Port Adelaide.

THE late Dr. Mayo, of Adelaide, left £27,300.

DR. A. J. MEIKLE has settled at Wallaroo.

DR. F. E. MOULE has removed from Jamestown to Mount Barker.

DR. A. E. J. RUSSELL, late of the Adelaide Hospital, has settled at Willunga.

DR. J. T. SANGSTER, Junr., late of the Adelaide Hospital, has commenced practice at Burra.

DR. E. TEICHELMAUN has removed from Port Adelaide to North Terrace, Adelaide.

TASMANIA.

DR. H. BENJAFIELD has been appointed Chairman of the Mount Stuart Town Board.

DR. J. M. M. MUIR has started practice at Wynyard, a port on the north coast, 124 miles north-west of Launceston.

DR. J. M. M. MUIR, of Wynyard, has been appointed a member of the local Board of Health, in the place of Dr. A. W. Graham, resigned.

BRIGADE Surgeon J. Smith, Lieutenant-Colonel in the Indian Army, has settled at West Devonport.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during January to every 1,000 of the population was 2.59, and of deaths 1.39. Males contributed 54 per cent. and females 46 per cent. to the mortality of the month. Children under five years of age contributed 43 per cent. to that mortality, as against 42 per cent. in January, 1894. One hundred and eighteen deaths, or 19 per cent. of the whole, took place in public institutions.

AT a recent meeting of the Castlemaine Hospital Committee, a letter was received from Dr. G. T. Woolley, bringing under notice the fact that in allowing the class of paying patients which have been recently admitted and treated at the hospital, the committee have, in his opinion, been entering into a most cruel competition with the medical men living in the town, and that an institution subsidised by Government and subscribed to by the people should not be asked to provide cheap medical attendance for those well able to pay properly for their own. Reference was made by the writer to certain rules of the hospital bearing on the matter. It was resolved to refer the matter to a committee for consideration to frame a rule on the point.

£1,000 have been left to the Daylesford Hospital towards building an addition to the institution, preferably a female ward, by the late W. E. Stanbridge, of Wombat.

THE Ararat Shire Council, with a view to effect retrenchment, have dispensed with the services of the health officer, health inspectors, and slaughtering inspectors.

DR. COLIN HENDERSON, M.D., Ch. M., Aberd. 1876, L. et L. Mid., R.C.P. et R.C.S. Edin. 1889, formerly Resident Surgeon at the Castlemaine Hospital, died at San José, California, on 10th November last.

IT is with deep regret that we have to announce the death, on the 6th February, from pneumonia, of Mr. S. M. Burroughs, of the well-known firm of Burroughs, Wellcome and Co., manufacturing chemists of London and Melbourne. He was the pioneer of the idea of compressing drugs into "tabloid" form; and, besides, he first introduced to the profession a large number of new drugs contained in the extra-pharmacopoeia. His decease will be regretted by a large number of our readers who made his acquaintance when he visited Australia twelve years ago.

DR. N. B. GANDEVIA, formerly of Coleraine, has returned from England, and succeeded to Dr. Jermyn's practice at Kororoit.

DR. JOHN GRAY, of Avenel, who has been local health officer for some years, has received notice from the Shire Council that, owing to the necessity for retrenchment, his services would not be required after 12th March.

PROFESSOR DR. HALFORD, Professor of Physiology and Histology, also Dean of the Faculty of Medicine of the Melbourne University, has intimated his wish to resign his offices at the end of the second vacation in 1896. Professor Halford is seventy-one years of age, and has been at work thirty-three years.

DR. A. PARK, a recent arrival, has settled at Nagambie.

DR. G. H. FALTER has removed from Learmonth to Ballan.

DR. E. YEATES, late of Quirindi, N.S.W., has succeeded to Dr. Salter's practice at Learmonth.

WESTERN AUSTRALIA.

THERE were registered in the colony during the quarter ending 31st December last, 557 births (281 males and 276 females), or 0.68 per cent. to the population; the number of deaths registered was 305 (221 males and 84 females), or 0.37 per cent. to the population. The total deaths under one year of age was 80, being 14.36 per cent. to total births, and 26.23 per cent. to total deaths. The total population on December 31st was 82,072, viz., 55,072 males and 27,000 females.

DR. H. W. NIX, of Marble Bar, has been appointed a Justice of the Peace for the colony.

DR. THOS. HY. ROBINSON, of Albany, has been appointed Surgeon-Captain of the Western Australian Defence Forces.

FIJI.

DR. P. J. DROUGHT, late of Crookwell (N.S.W.), and Dr. Brown, late of India, have commenced practice at Suva, in the place of the late Dr. Blyth.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

BACKHOUSE.—On February 14th, at North Brighton, Vic., the wife of J. Burder Backhouse, M.B., of a daughter.

BERGLING.—On February 3rd, at North Shore, the wife of Dr. B. H. Beegling, of a daughter.

EVANS.—On February 11th, at Brompton, Adelaide, the wife of J. H. Evans, M.B., B.S., of a son.

KERR.—On February 2nd, at Orbest, Vio., the wife of James Kerr, M.B., C.M., of a daughter.

LAWRENCE.—On January 26th, at Fitaroy, Melbourne, the wife of Herman Lawrence, M.R.C.P.E., &c., of a son.

LONDON.—On January 22nd, at Adelaide, the wife of A. A. London, M.D., of a son.

MAOGILLIUDY.—On February 9th, at Richmond, Vic., the wife of Dr. D. Florence MacGilloudy of a daughter.

MAHER.—On February 21st, at Burwood, Sydney, the wife of W. Odillo Maher, M.D., of a son.

MALLAM.—On February 14th, at Armidale, N.S.W., the wife of Dr. L. G. Mallam, of a daughter.

NAPHTHINE.—On February 11th, at Stawell, Vic., the wife of G. J. Naphthine, L.R.C.S., Edin., of a daughter.

NEWMAN.—On February 8th, at Geelong, Vic., the wife of Fossey J. Newman, M.B. et B.S., of a daughter.

ROLLASON.—On February 16th, at Heidelberg, Vic., the wife of A. Rollason, L.R.C.P. Lon., M.R.C.S. Eng., of a son.

SPARROW.—On February 25th, at Albert Park, South Melbourne, the wife of Dr. Sparrow, of a daughter.

WALSH.—On February 2nd, at K. v. Melbourne, the wife of W. Butler Walsh, M.D., F.R.C.S.I., of twin daughters.

WEEKES.—On February 25th, at Croydon, Sydney, the wife of C. J. Weekes, ophthalmic surgeon, of a daughter.

MARRIAGE.

ARGYLE—LEWIS.—On January 24th, at Holy Trinity Church, Kew, Vic., Stanley Seymour Argyle, M.B., M.R.C.S., to Violet Jessie, eldest daughter of Thomas Lewis, of Kew.

DEATHS.

THANE.—On February 16, at Yass, N.S.W., Annie Flora, the wife of Philip Thornton Thane, L.R.C.P. Lond., aged 32 years.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Hickman-Taylor, George, M.D. Coll. P. et S. Keokuk, Iowa, U.S.A., 1881.
Cunningham, James, M.B. et M.S. Univ. Edin., 1889.
Weber, Johann August, M.D. et Ch. D. Giessen, 1876; State Exam. Certif. Leyden, 1876.
Tyrrell, Gerrard George, M.D. Univ. Vermont, U.S.A., 1892.
Lowson, William Fyfe Craik, M.B. et M.S. Univ. Edin., 1890.
Vlokery, Robert Glen, M.B. et Ch. B. Univ. Melb., 1891.
Simpson, Frederick Wright, M.D. Cooper Med. Coll. San Francisco, U.S.A., 1894.
O'Sullivan, Edward Francis, M.D. et Ch. M.R.U. Irel., 1886.

For Additional Registration:—
Carruthers, Charles Ulrick, M.R.C.P. Irel., 1894.

NEW ZEALAND.

Hoggan, Bertram Brooke, L.R.C.P. et R.C.S. Ed.; L.F.P.S. Glas.
Todd, William, M.D. Cooper Medical Coll. of Cal.
Lewers, Richardson Wakefield, M.B., Ch. B. Melb., 1889.
Campbell, Matthew, M.B., B.S. Univ. N.Z., 1895.

QUEENSLAND.

Zichy-Wolnarski, Gustave Henry Stephen, M.B., Ch. B., Melb., 1883.

SOUTH AUSTRALIA.

Corbin, Cecil, M.B., B.S. Adel., 1894.
Gething, William John, L. et L. Mid. L.R.C.P. et R.C.S. Edin.; L.F.P.S. Glas., 1894.
Pullin, Frank Bingley, L. et L. Mid. R.C.P. Edin.; L. et L. Mid. F.P.S. Glas., 1879.

TASMANIA.

Muir, James Millar Mackay, M.B., M.S. Glas., 1889.
Smith, James, L.R.C.P. et R.C.S. Edin., 1884.

VICTORIA.

Park, Alexander, M.B., Ch. B. et B.A.O. R. Univ. Irel., 1894.
Yeates, Edward, L. 1886, F. 1893, R.C.S. Irel.; L. et L. Mid. K.Q.C.P. Irel., 1893.

Names erased from the Register under the provisions of Section 7 of the Act:—

No. 984, William Henry Coutie.
No. 1093, Thomas Deatry Atkins.
No. 1693, Matthias Butler.
No. 1795, Arthur Edward Josecelyne.

Names restored to the Register under the provisions of Section 7 of the Act:—

No. 959, Harry Sydenham Lyons, M.B. et Ch. B. Glas., L. et L. Mid. R.C.S. et R.C.P. Edin., 1879.
No. 1613, John Molnery, L.S.A. Lond., 1889, M.D.C.P.S. City of New York, 1894.
No. 1626, Richard John Lesper, L.R.C.S. Irel., 1885, L.A.H. Dubl., 1887.

Additional qualification registered:—
No. 959, Harry Sydenham Lyons, M.D. Glas., 1885.

MEDICAL APPOINTMENTS.

Boehke, Paul W. R., M.B., Ch. M. Syd., to be Government Medical Officer and Vaccinator for the district of Port Macquarie, N.S.W.
Hogg, Gustave Heuze, M.B., M.S. Edin., to be Government Medical Officer and Vaccinator for the district of Cooma, N.S.W., *vice* Dr. J. Clifford, resigned.
Newman, Fossey James, M.B., to be Health Officer for the Shire of Barrabool, Vic.
Smith James, L.R.C.S. et R.C.P. Edin., to be Health Officer and Medical Officer to police and gaols and paupers at West Devonport, Tas., *vice* Dr. C. S. Richardson, resigned.

APPENDIX.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

LIST OF MEMBERS FOR THE YEAR 1895.

(Published in accordance with the Articles of Association.)

(Members will be good enough to note if their Addresses and Qualifications are correctly stated.)

Abbott, George Henry, M.B. C.M., Syd. Petersham
Alcorn, B. G., L.R.C.P., Edin.; L.R.C.S., Eng., West Maitland.
Alcorn, S.A., M.B., C.B., Dub. Uni., East Maitland.
Allan, R. J., L. et L., Mid. R.C.P., Edin.; M.R.C.S. Eng., Dulwich Hill.
Anderson, Thomas P., M.B., C.M., Glas., Kisma.
Andrews, A., M.R.C.S., Eng.; L.S.A., Lond., Albury.
Armstrong, Geo., M.B., C.B., Melb., Sydney Hospital.
Arthur, Richard, M.D., Edin., Mosman's Bay.
Asher, Morris, L.R.C.S., L.K.Q.C.P., Irel., Lithgow.
Ashwell, Frederick, M.B., C.M., Edin., Glebe.
Barkas, W.J., L.R.C.P., Lond.; M.R.C.S., Eng., Paddington.
Bassett, W. P., M.D., Edin.; M.R.C.S., Eng., Bathurst.
†Beattie, J.A., L.K.Q.C.P., L.R.C.S., Irel., Liverpool.
Beaston, J. L., L.R.C.S., L.K.Q.C.P., Irel., Newcastle.
Beith, Robt., M.B., C.M., Glas., Mudgee.
Bennet, F. A., M.A., M.D., C.M., Aberd., College-street, Sydney.
Binney, E. H., M.B., C.M., Syd., Sydney Hospital.
Blackall, Patk., M.D., C.M., M.A.O., Royal Univ., Irel., Queanbeyan.
Blackwood, F.M., M.B., Dub.; M.R.C.S., Eng., Summer Hill.
Boelke, Grace Fairley, M.B., C.M., Syd., Port Macquarie.
Bohrsmann, Otto, M.B., C.M., Aber., 139 Elizabeth-street, Sydney.
Bott, Joseph, M.R.C.S., L.S.A., Lond., Balmain.
Bowker, R. Steer, junr., L.R.C.P., Edin.; M.R.C.S., Eng., Elizabeth-st., Sydney.
Bowman, Reginald, M.B., C.M., Edin.; M.R.C.S. Eng., Parramatta.
Bowman, Alistair Stewart, B.A., Syd.; M.B., C.M., Edin., Singleton.
Brady, Andrew John, L.K.Q.C.P., L.R.C.S., Irel., Lyons' Terrace, Hyde Park, Sydney.
†Breneman, P. P., M.D., Penns., U.S.A.
Brown, W. S., M.R.C.S., L.S.A., Lond., Parramatta.
Browne, Harold, M.R.C.S., Eng.; L.R.C.P., Lond., Molong.
Brownless, A. C., M.B., Ch.B., Melb., Elizabeth-street, Sydney.
Bucknell, L. F., L.R.C.P., L.R.C.S., Edin., Belgrave-street, Kogarah.
Burkitt, W. A. Handcock, B.A., M.B., B.C.A., B.A.O., Dub., Goulburn.
†Camac, S. J., L.R.C.P., L.R.C.S., Eng., Harris-street, Pyrmont.
Chambers, Thomas, F.R.C.P., Edin.; F.R.C.S., Edin.; M.R.C.S., Eng., Lyons' Terrace, Liverpool street, Sydney.
Chenhall, W. T., M.B., Ch.B., Melb., Marrickville.
Chisholm, Edwin, M.R.C.S., Eng.; L.S.A., Lond.; M.D., St. And., Burradoo.
*Chisholm, W., B.A., Syd.; M.D., Lond.; M.R.C.S., Eng., Macquarie-street, Sydney.

* Members of the Council for 1894.

† Have not yet signed form of agreement of membership of incorporated body.

- Clark, Charles Dagnall, M.B., Lond.; L.R.C.P., Lond.; M.R.C.S., Eng., North Sydney.
- Clay, W. Rudolph, M.R.C.S., Eng.; L.R.C.P., Lond., Arncliffe.
- *Clubbe, Charles Percy Barlee, L.R.C.P., Lond.; M.R.C.S., Eng., 195 Macquarie-street, Sydney.
- Clune, Michael Joseph, K.Q.C.P., L.R.C.S., Irel.; M.A., Syd.; M.D., Ch.D., Brux., College-street, Sydney.
- Coben, Algernon, M.D., Aberd.; M.R.C.S., Eng., Darlinghurst Road.
- Collingwood, D., M.D., Lond.; F.R.C.S., Eng., Summer Hill.
- Collins, P. J., L.R.C.S., Irel.; L.K.Q.C.P., Irel., Woollahra.
- Colpe, J., M.D., Leip., 197 Liverpool-street.
- Connor, F. G., M.B., C.M., Edin., Lismore.
- Corlette, C. E., M.B., C.M., Syd., St. John's Parsonage, Ashfield.
- †Cortis, W. B., L.R.C.P., &c., Cowra.
- Cotton, d'Englesqueville, M.D., Paris, Hunter's Hill.
- Coutie, W. Henry, M.B., B.S., Melb., Petersham.
- †Cox, A. E., M.B., C.M., Edin., Forbes.
- Crabbe, J. B., M.B., C.M., Edin., Chatswood.
- *Crago, W. H., L.R.C.P., Lond.; M.R.C.S., Eng., College-street, Sydney.
- Creed, the Hon. John Mildred, M.L.C., M.R.C.S., Eng.; L.R.C.P., Edin., Woollahra.
- Cribb, A. G., M.B.C.S., Eng.; L.R.C.P., Lond., Newcastle.
- Crommelin, C. E., M.D., Cincinnati Coll., U.S.A., Casino.
- Crooke, R. W., L.R.C.P., S., Edin.; L.F.P.S., Glas., Young.
- Cummings, H. L., L.R.C.P., Lond.; M.R.C.S., Eng., Annandale.
- †Dalton, F. G., *Met* L. Mid. R.C.S., Eng.; L.S.A., Lond., Picton.
- Davis, Gateward C., M.B.C.S., Eng.; L.R.C.P., Lond., 173 Liverpool-street, Sydney.
- Dawson, C. L., M.R.C.S., L.R.C.P., Lond., Berry.
- Dick, James A., B.A., Syd.; M.D., C.M., Edin., Randwick.
- Dick, Robert, M.B., C.M., Syd., Gulgong.
- Dixon, Thomas, M.B., C.M., Kdin., Elizabeth-street, Sydney.
- Dowdell, C., Seymour, M.B., Lond.; M.R.C.S., L.R.C.P., Eng., Hunter-street, Sydney.
- Dowe, Samuel Aloys, M.D., Penna., U.S.A., Wyalong.
- †Edwards, Charles A., L.R.C.P., L.R.C.S., Edin.; L.S.A., Lond., Waverley.
- Edmunds, D. Taylor, M.R.C.S., Eng.; L.R.C.P., Edin., Bathurst.
- †Ellis, Henry A., M.B., Ch.B., Dub., Coolgardie, W.A.
- English, Jos., L.R.C.P., *et* S., Edin., Yass.
- Evans, Thomas, M.R.C.S., L.S.A., Lond., 211 Macquarie-street.
- Falles, F. G., M.R.C.S., Eng.; L.S.A., Lond., Coona-barabran.
- Faithfull, R. L., L.R.C.P., Lond.; L.S.A., Lond.; M.D., New York; Liverpool-street, Sydney.
- Ferguson, R., M.B., C.M., M.D., Glas., Hunter-street, Newcastle.
- *Fiaschi, Thomas, M.D., C.D., Pisa, Phillip-street, Sydney.
- Fieldstad, Axel. H., Physician and Surgeon (States' Exam., Norway), Randwick.
- Fieldler, Sydney, L.K.Q.C.P., Irel.; L.S.A., Lond., Gosford.
- †Finlay, Sinclair, L.R.C.S., Irel.; L.M. *et* L.K.Q.C.P., Irel., Stroud.
- Fisher, T. Carson, M.D., C.M., T.C., Dub., Bowral.
- Fitzpatrick, Alfred, L.R.C.P., L.R.C.S., Edin., Crookwell.
- Florance, Egbert, M.D., Penna. Univ., U.S.A., Cootamundra.
- Flynn, John, M.B., C.M., Irel., 78 Newtown-road, Sydney.
- Foreman, Joseph, L.R.C.P., Edin.; M.R.C.S., Eng.; L.S.A., Lond., Macquarie-street, Sydney.
- Foster, A., M.R.C.S., Eng.; L.R.C.P., Lond., Hornsby.
- Fox, Walter, M.B., C.M., Glas., Narandera.
- Frizell, Thos., M.D., C.M., R.U., Irel.; B.A., Q.U., Irel.; L.M., K.Q.C.P., Irel., Strathfield.
- Furnival, Francis H., M.R.C.S., Eng.; L.S.A., Lond., Auburn.
- †Garrett, F. W., L.R.C.P., S., Edin.; L.F.P.S., Glas., Parramatta.
- †Garrett, Henry Edward, M.R.C.S., Eng., Liverpool-street, Sydney.
- Gledden, A. Maitland, M.D., C.D., Brux.; F.R.C.S., Edin.; M.R.C.S., L.R.C.P., Eng., West Maitland.
- Gill, J. M., M.D., Lond.; M.R.C.S., Eng.; L.R.C.P., Lond., Liverpool-street.
- †Godson, Edwin, M.R.C.S., Eng., Parramatta.
- Goode, W. H., A.B., M.A., M.D., C.M., Dub.; L. Mid. K.Q.C.P., Irel., Macquarie-street.
- Graham, James, M.A., M.D., C.M., Edin., Liverpool-street, Sydney.
- Green, T.A., M.B., C.M., Syd., Dulwich Hill.
- Grigson, B. E., M.R.C.S., Eng., Muswellbrook.
- Gwynne-Hughes, D., L.R.C.P., L.R.C.S., Edin., Castlereagh-street, Redfern.
- Hall, F. W., M.D., M.S., Lond.; M.R.C.S., Eng.; L.R.C.P., Lond., College-street.
- Handcock, C. L., B.A., M.B., C.M., Syd., Goulburn.
- Hankins, George Thomas, M.R.C.S., Eng.; L.S.A., Lond., Allison-road, Randwick.
- Harris, H. L., J.P., M.B., Ch.B., Melb., Tamworth.
- Harrison, Thos., M.D., C.M., Dub., Granville.
- Harvey, R. R., M.B., C.M., Melb., Wentworth.
- Harwood, A. J., L.R.C.P., S., Edin., L.F.P.S., Glas., Adamstown.
- Helsham, W. M., M.R.C.S., Eng.; L.R.C.P., Lond., Richmond.
- Henry, A. G., M.B., C.M., Syd.; Callan Park, Balmain.
- Henry, Thos. Jas., L.R.C.P., S., Edin.; L.F.P., S., Glas., Warialda.
- Hetherington, Henry Budd, M.D., C.M., Edin., Rockdale.
- Hinder, H. C., M.B., M.S., Syd., Ashfield.
- Höets, A. K., M.R.C.S., Eng.; L.S.A., Lond., Burrowa.
- †Hood, A. Jarvie, M.B., C.M., Glas., Elizabeth-street, Sydney.
- Houison, J., M.B., C.M., Edin.; M.D., Syd., Grafton.
- Hull, Walter, M.D., M.R.C.S., Lond., Cootamundra.
- †Hunter, Robert, L.R.C.P., R.C.S., Edin., Jamieson-street, Sydney.
- Hurst, George, M.A., Syd., M.B., C.M., Edin.; M.B., Lond., Bathurst.
- *Huxtable, L. Balston, M.B., C.M., Edin., College-street, Sydney.
- Huxtable, R. B., M.B., C.M., Edin., Charters Towers.
- †Jackson, J. F., M.R.C.S., Eng.; L.R.C.P., Edin., 158 Phillip-street.
- Jamieson, Sydney, B.A., Syd.; M.B. *et* C.M., Edin.; L.R.C.P., Lond.; M.R.C.S., Eng., Liverpool-street, Sydney.
- *Jenkins, E. J., M.A., M.D., Oxon.; M.R.C.P., Lond.; M.R.C.S., Eng.; L.S.A., Lond., Macquarie-street, Sydney.
- Johnson, A. M., M.D., C.M., R.U., Irel.; M.A., Dub.; L. Mid. Rot. Hosp., Dub., Rligh-street.

* Members of the Council for 1894.

† Have not yet signed form of agreement of membership of incorporated body.

* Members of the Council for 1894.

† Have not yet signed form of agreement of membership of incorporated body.

‡ Auditor.

- *Jones, P. Sydney, M.D., Lond.; F.R.C.S., Eng., 16 College-street, Hyde Park, Sydney.
- †Keenan, A. J. W., M.D., Brux.; L.R.C.S., L.R.C.P., Eng., 40 College-street, Sydney.
- †Kendall, P. S., L.R.C.P., L.R.C.S., Edin., Petersham.
- Kendall, T. M., L. L. Mid. R.C.P., et R.O.S., Edin.; College-street, Hyde Park, Sydney.
- Kenna, P. J., M.B., C.M., Edin., 2 Lyons' Terrace, Liverpool-street, Sydney.
- Kerr, John, M.B., C.M., Glas., Wollongong.
- Kingsbury, James, M.D., University of Penn., U.S.A., Church-street, Newtown.
- Kinross, R. M., B.A., M.B., C.M., Syd., Inverell.
- Kirkland, Hugh, M.B., C.M., Glas., Bathurst.
- Kirkland, T. S., M.B., C.M., Glas., Croydon.
- *Knaggs, Samuel Thomas, M.D. C.M., Aberd.; L.K.Q.C.P., Irel.; F.R.C.S., Irel.; M.D., Syd., College-street, Sydney.
- Kyngdon, Frederick Henry, M.D. C.M., Aberd.; M.R.C.S., Eng.; L.S.A., Lond., Miller-street, North Sydney.
- Lamrock, L. J., M.D., Edin., Waverley.
- Langhorne, T. Grant, M.R.C.S., Eng.; L.R.C.P., Edin.; Redfern-street, Redfern.
- Langton, F. W., M.B., C.M., Edin., 47 Castlereagh-street, Redfern.
- †Leahy, J. D., B.A., M.B., C.M., Syd., Queensland.
- Lee, H. E., B.A., M.B., C.M., Edin., Gunnedah.
- Lee, T. Wood, M.R.C.S., Eng.; L.S.A., Lond., Wollongong.
- Lenhoff, G., M.D., Berl., Glebe Point.
- Litchfield, W. F., M.B., C.M., Syd., Children's Hospital, Glebe.
- Lloyd, Henry Sanderson, M.B., C.M., Edin.; M.R.C.S., Eng., Hunter's Hill.
- Luker, Donald, M.B., C.M., Syd., Barraba.
- †Lyden, Michael Joseph, M.D., C.M., Irel., 44 College-street, Sydney.
- Macbattie, Thomas Alfred, M.B., C.M., Edin., Bathurst.
- Mackellar, the Hon. Charles Kinnaird, M.L.C., M.B., C.M., Glas., Liverpool-street, Sydney.
- Macleod, Charles Gordon, M.B., C.M., Edin., 26 College-street, Sydney.
- Macleod, Jas., M.B., C.M., Edin., 159 Liverpool-street.
- Macky, Jas., L.R.C.P., S., Edin.; L.F.P.S., Glasg., 122 Glebe-road.
- MacLaurin, the Hon. Henry Norman, M.L.C., M.D., L.R.C.S., Edin., Macquarie-street, Sydney.
- †MacSwinnery, George H., M.D., C.M., Q.U., Irel., Stanmore.
- †Maguire, S., L.R.C.S., L.K.Q.C.P., Irel., Petersham.
- Maier, Chas. H., M.R.C.S., Eng.; L.K.Q.C.P., Irel., Burwood.
- Maier, W. O., M.D., C.M., L. Mid., Q.U., Irel.; M.R.C.S., Eng.; M.D., Syd., College-street, Sydney.
- Maitland H. L., M.B., C.M., Syd., 197 Elizabeth-street.
- Manning, Frederick Norton, M.R.C.S., Eng.; L.S.A., Lond.; M.D., St. And., Hunter's Hill.
- †Marano, Vincenzo, M.D. et C.D., Naples, Elizabeth-street, Sydney.
- Marshall, G. A., M.B., C.B., Dub., College-street, Sydney.
- Marshall, Hexlett H., L.R.C.P. et S., Edin., 2 Lyons' Terrace, Liverpool-street, Sydney.
- Marshall F. W., M.B., C.M., Edin., Elizabeth-street.
- Martin, Chas. J., M.B., B.Sc., Lond.; M.R.C.S., Eng., University, Sydney.
- Martin, T. M., A.B.T.C., Dub.; L. et L. Mid. R.C.P., Edin.; R.O.S., Edin., College-street, Hyde Park, Sydney.
- Matthews, Thos., L.R.O.P., S., Edin., Nowra.
- Max Sully, Albert, M.R.O.S., Eng.; L.R.C.P., Lond., Riverstone.
- McAlister, J., M.D., B.S., Melb., Stanmore.
- McCormick, Alexander, M.R.C.S., Eng.; M.D., Edin., Macquarie-street, Sydney.
- †McCulloch, Stanthorpe H., M.B., C.M., Edin., College-street.
- McDonagh, John D., B.A., Syd.; M.D., Brux.; M.R.C.P., Lond.; L. Mid. et F.R.C.S., Irel., 173 Macquarie-street, Sydney.
- McDonnell, Edwd., P., L.K.Q.C.P., L.R.C.S., Irel., Forbes.
- Mellroy, J. B., M.R.C.S., L.R.C.P., L.S.A., Lond., Annandale.
- McKay, W. J. S., M.B., C.M., Syd., Enmore.
- McKillop, R., F.R.C.S., L.R.C.P., Edin., Goulburn.
- McLeod, James, M.B., C.M., Edin., Hurstville.
- †McMath, Arthur William, L.R.O.S., L.K.Q.C.P., Irel., Dungog.
- McMurray, Wahab, M.D., C.M., L.M., Q.U., Irel., 2 Lyons' Terrace, Liverpool-street, Sydney.
- McNeil, J. P., B.A., M.D., B. Univ., Irel.; L.R.C.S., Irel., Burwood.
- Megginson, A. M., M.B., et C.M., Edin., Elizabeth-street, Hyde Park, Sydney.
- †Mellish, Percy H. S., L.R.C.P., S., Edin., Elimbah, via Caboolture, Queensland.
- Mills, Arthur E., M.B., C.M., Syd., Picton.
- Money, Angel, M.D., Lond.; F.R.O.P., Lond., Hunter-street, Sydney.
- Moore, J. B., L.R.C.P., S., Irel., Bathurst.
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- Morton, Gavin, M.B., Syd., Gladesville.
- Morton, Jno., M.B., C.M., Syd., Camden.
- Mullins, George Lane, M.A., M.D., Trin. Coll., Dub., L. Mid. K.Q.C.P., Irel.; M.D., Sydney, Waverley.
- Munro, A. Watson, F.R.C.S., M.D., C.M., L.R.C.S., Edin., 183 Liverpool-street, Hyde Park, Sydney.
- Munro, W. J., B.A., M.B. et C.M., Edin.; M.R.C.S., Eng., Glebe Road.
- Murray, Geo. L., M.B., C.M., Syd., Prince Alfred Hospital, Newtown.
- †Murray, J. Goodlatte, L.R.C.S., L.R.C.P., Edin., Parkes.
- Murray, W., M.B., Dub.; M.R.C.S., Eng., Armidale.
- Muskett, Philip Edward, L.R.C.P., et R.C.S., Edin., 143 Elizabeth-street, Sydney.
- Nash, A. W., M.B., C.M., Edin., Robertson.
- Nash, J. B., M.D., Edin.; M.R.C.S., Eng., Wallsend.
- Neill, L. E. F., B.A., M.B., C.M., Syd., Bayswater House, Double Bay.
- Newland, E. O., L.R.C.S., Eng.; L.R.C.P., Lond., Coonamble.
- Newmarch, Bernard James, L.R.C.P., Lond.; M.R.C.S., Eng., North Sydney.
- Norrie, Andrew, M.D., C.M., Aberd., Liverpool-street, Sydney.
- †O'Connor, Maurice John, L.R.C.S., L.K.Q.C.P., Irel., Darlinghurst.
- O'Hara, A. A., M.B., C.M., Edin., Darlinghurst.
- O'Neil, Gregory L., M.B., C.M., Edin., Elizabeth-street, Sydney.
- †Oram, Arthur Murray, M.D., C.M., Edin., Macquarie-street, Sydney.
- O'Reilly, Walter W. Joseph, M.D. et C.M., Irel.; M.R.C.S., Eng., Liverpool-street, Hyde Park, Sydney.
- Parker, Arthur Frederick, M.R.C.S., Eng.; L.S.A., Lond., Woollahra.

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† Have not yet signed form of agreement of membership of incorporated body.

‡ Auditor.

† Have not yet signed form of agreement of membership of incorporated body.

- Parker, Joseph, L.R.C.P., Edin.; L.F.P.S., Glas., 187 William-street, Sydney.
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- Pilkinson, F. S., L.R.C.P., Lond.; M.R.C.S., Eng., Mosman's Bay.
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- Reading, Richard Fairfax, M.R.C.S., Eng.; L.R.C.P., Lond.; L.D.S., Eng., 151 Macquarie-street, Sydney.
- Reddall, O. H., M.R.C.S., Eng.; L.R.C.P., Lond., Randwick.
- Rennie, G. E., M.D., Lond.; M.R.C.S., Eng., 16 College-street, Sydney.
- †Benwick, the Hon. Sir Arthur, Kt., M.L.C., F.R.C.S., Edin.; M.D., Edin.; Elizabeth-street, Sydney.
- Robertson, Ernest, M.D., C.M., Edin.; M.R.C.S., Eng.; Auckland, New Zealand.
- Roberts, Sir Alfred, Ch., M.R.C.S., Eng.; L.S.A., Lond., Macquarie-street, Sydney.
- Rorke, Charles, L.R.C.S., et L.K.Q.C.P., Irel., North Sydney.
- Ross, C., M.B., et C.M., Edin.; M.D., Syd., Goulburn.
- Ross, E. Fairfax, M.D., Brux.; L.R.C.P., Lond., M.R.C.S., Eng., Macquarie-street, Sydney.
- Roth, R. E., M.R.C.S., Eng., College-street, Sydney.
- Rutledge, D. D., M.A., M.B., C.M., Syd., Waverley.
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- Sawkins, F. J. T., M.B., C.M., Sydney, Prince Alfred Hospital.
- Schrader, S. H., M.D., Cali., Narrabri.
- Schwartzbach, B. B., M.D., C.D., Wurzburg; L. et L., Mid. F.P.S., Glas., College-street.
- †Service, John, L.R.C.P., S. Edin., Newtown.
- Scot Skirving, Robert, M.B., C.M., Edin., Elizabeth-street, Sydney.
- Scott, H. J. H., M.R.C.S., Eng., L.R.C.P., Lond., Scone.
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- Sheldon, W., M.D., Edin.; M.R.C.S., Eng., North Sydney.
- Shewen, Alfred, M.D., Lond.; M.R.C.S., Eng., Liverpool-street, Sydney.
- Sinclair, Eric, M.D., C.M., Glas., Gladesville.
- Smith, G. H. Walton, L.R.C.P., Edin.; K.F.P. and S., Glas., Woollahra.
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- †Soule, Milan, M.D., Vermont, U.S.A., Honolulu.
- Spencer, Walter, M.D., Brux., L.R.C.P., Edin.; M.R.C.S., Eng.; L.S.A., Lond., Edgeware-road, Enmore.
- Stanley, G. P., M.B., C.M., Syd., Blackheath.
- Stapleton, Joseph, M.D., C.M., Edin.; M.R.C.S., Eng., Lambton.
- Steel, John James, L.R.C.P. et R.C.S., Edin.; M.B., Ch.B., Melb., Liverpool-street, Sydney.
- Stevenson, F. C., L. et L. Mid. K.Q.C.P., Irel.; L.R.C.S., Irel., Moss Vale.
- Stokes, Edwd. S., M.B., C.M., Syd., Port Macquarie.
- Stuart, Thomas Peter Anderson, M.D., C.M., Edin., Professor of Physiology, University, Sydney.
- Sturt, Clifton, L.R.C.P. et R.C.S., Edin., L.F.P.S., Glas., Bulli.
- Sutherland, George W., M.D., Lond.; M.B., C.M., Edin., Liverpool-street, Sydney.
- †Taylor, George H., L.R.C.S. et P., Edin., Little Bay.
- Tennant, E. G., M.B.C.S., Eng., Wagga Wagga.
- Tennent, T. H. L., et L., Mid. F.P.S., Glas., Hillston.
- Terry, Caleb, M.B., C.M., B.Sc., Kdin., Kiama.
- Thane, E. H., M.D., Lond.; M.R.C.S., Eng.; L.R.C.P., Lond., Wagga Wagga.
- Thane, P. T., L.R.C.P., Lond.; M.R.C.S., Eng.; L.S.A., Lond., Yass.
- Thomas, David, F.R.C.S., Eng.; L.R.C.P., Lond., Manly.
- Thompson, J. Ashburton, M.D., Brus., D.P.H., M.R.C.S., Eng., 32 Craigend-street.
- †Thorp, C. Gabriel, M.B., C.M., Edin., Gladstone, Queensland.
- *Thring, E. T., F.R.C.S., Eng.; L.R.C.P., Lond., Macquarie-street.
- Tibbits, Walter, M.R.C.S., Eng., Gunning.
- Tidswell, Frank, M.B., C.M., Syd., Randwick.
- Todd, Robert H., M.D., C.M., Dub.; F.R.C.S., Irel., 5 Barcom-avenue, Darlinghurst.
- Traill, Mark Windeyer, L.R.C.P., Lond.; M.R.C.S., Eng., Burwood.
- Tresidder, H., M.R.C.S., Eng.; L.R.C.P., Lond., Dubbo.
- Trindall, Richard B., B.A., M.B., C.M., Syd., Newtown.
- Twynam, G. E., M.R.C.S., Eng.; L.R.C.P., Lond., Bayswater-road, Darlinghurst.
- Van Someren, G. A., M.D., C.M., Edin., Orange.
- Vause, Arthur John, M.B., C.M., Edin., Tempe, Cook's River.
- Walley, T. B., L. et D., Mid. K.Q.C.P., Irel., F.R.C.S., Irel., Tamworth.
- Warren, William Edward, M.D., C.M., Irel., M.D., Syd., Elizabeth-street, Sydney.
- Watkins, S. C., M.R.C.S., Eng., Manly.
- †Watson, Charles Russell, M.R.C.S., Eng., L.S.A., Lond., Newtown.
- Weekes, C. J., M.R.C.S., Eng.; L.R.C.P., Lond., 36 College-street.
- West, W. A., L.R.C.S., Irel.; L.K.Q.C.P., Irel., Glebe.
- Wilkinson, W. Camac, M.D., M.R.C.P., Lond., M.R.C.S., Eng., Ocean-street, Woollahra.
- Will, A. Murray, M.B., C.M., Aberd., College-street, Sydney.
- Wilson, J. H., L.R.C.P. et R.C.S., Edin., L.F.P.S., Glas., Warren.
- Wilson, J. T., M.B., C.M., Edin., Professor of Anatomy, Sydney University.
- Wood, Percy Moore, M.R.C.S., Eng.; L.R.C.P., Lond., Holden-street, Ashfield.
- Woodward, E. A., M.B., C.M., Edin., Blayney.
- *Worrall, Ralph, M.D., C.M., Q.U., Irel., College-street, Sydney.
- Wright, Horatio George Anthony, M.R.C.S. Eng., L.S.A., Lond., Wynyard Square, Sydney.
- Young, R. W., M.R.C.S., Eng.; L.S.A., Lond., Milton.

* Members of the Council for 1894.

† Have not yet signed form of agreement of membership of incorporated body.

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REPORTED MORTALITY FOR THE MONTH OF JANUARY, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from											
					Measles.	Scarlet Fever.	Group and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.
N. S. WALES.																
Sydney	111,244	292	174	65	...	2	...	1	5	14	19	6	14	9	1	2
Suburbs	275,615	830	364	201	...	...	9	2	8	44	23	10	16	1	...	2
NEW ZEALAND.																
Auckland & suburbs..	42,545	108	52	24	...	...	1	...	1	9	2	2	3	3	...	1
Christchurch ..	41,590	100	38	17	...	...	...	1	...	5	4	1	4	3	...	...
Dunedin ..	48,476	111	41	9	...	...	...	...	...	1	4	4	6	3	...	...
Wellington ..	38,298	103	62	36	...	...	...	...	...	11	2	2	1	5	...	...
QUEENSLAND.																
Brisbane	56,075	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA.....	345,888	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	39,749	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																
Hobart	35,051	80	46	17	...	...	1	...	1	2	2	1	...	1	...	...
Launceston	22,674	49	28	27	...	...	...	...	1	1	1	...	1	1	1	...
Country Districts	98,484	273	58	...	2	...	2	1	...	1	2	...	...	...	...	...
VICTORIA.																
Melbourne	64,171	87	69	...	...	6	3	1	26	25	67	32	50	21	2	8
Suburbs	380,661	1,067	548	268	...	...	...	...	...	...	...	...	...	...	...	...
Ballarat and Suburbs ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
WESTERN AUSTRALIA*.	82,072	557	305	101	...	...	4	1	25	24	14	34	20	7	...	1

* For the quarter ending December 31st, 1894.

METEOROLOGICAL OBSERVATIONS FOR JANUARY, 1895.

STATIONS	THERMOMETER.					Mean Height of Barometer.	RAIN.		Mean Humidity.	Prevailing Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.			Depth.	Days.		
							Inches			
Adelaide—Lat. 34° 55' 38" S.; Long. 138° 36' E.
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.	79.5	68.3	57.	...	...	2.72	15	81	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.	98.4	63.0	42.2	...	...	2.19	13	73	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.	94.	59.6	44.	...	...	3.48	16	71	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.	90.	...	41.	29.981	...	.35	4	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.	84.	...	43.	29.969	...	.57	3	...	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.	99.	66.9	49.5	29.866	...	1.81	4	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.	102.	74.	56.	29.921	...	1.47	5	54	...
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.	90.3	69.6	59.	29.979	...	8.07	25	76	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.	79.0	65.0	47.	...	...	6.04	13	72	...

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

A REMARKABLE CASE OF ATROPINE POISONING, WITH SOME REMARKS ON THE ANTAGONISM OF POISONS.

By A. H. FIELDSTAD, M.D., RANDWICK, N.S.W.

On the morning of October 24th, ult., I received a message, that a lady, whom I knew to be an habitual morphinist, was suffering from the effects of an over-dose of morphia. On my arrival, however, I found a picture entirely different from what I expected. The patient was sitting up in bed, with face flushed, and the pupils dilated *ad maximum*, and not reacting to light. She seemed highly excited and was incessantly muttering incoherent and incomprehensible words in a husky voice. The eyelids were moving rapidly, as if light was disagreeable to her, arms and legs were in constant motion, and she was all the time wanting to get out of bed. When she got out, however, she had to return at once, as her legs would not support her. Pulse 124, temperature 98.6, tongue and mouth very dry. She had hallucinations, as she managed to make me understand that she saw people climbing on to the balcony. Asked if she knew me, she with some difficulty gave my name. She complained that her feet were cold like ice.

On questioning the attending maid, I learnt that late the previous night the patient injected what she thought to be her usual dose of morphia. She was in the habit of injecting three times in twenty-four hours, each time four syringesful of a solution of morph. sulph. grs xx in 3j. Her syringe measured $\frac{1}{16}$ ounce, consequently her single dose was $2\frac{1}{2}$ grs., and her daily dose 8 grs. The previous night she injected only three syringesful or perhaps only two; for while in the act of injecting the third, she dropped both syringe and bottle, with the result that the bottle was broken, and the contents spilt. The above-mentioned symptoms set in almost at once and continued all night.

There could be no doubt that this was a case of severe atropine poisoning, and as she during the previous twenty-four hours evidently had only had two instead of three single doses of morphia, I did not hesitate to inject at once grs. ij., of morph. sulph., and with greatly beneficial result. She became much calmer, and the rapidity of the pulse decreased, but the size of the pupils remained the same. She afterwards had a prolonged hot bath, after which she con-

tinued to improve. She complained greatly of dryness in the mouth and throat, and when she looked in the paper, discovered that she could not read.

At the time, of course, I did not know what quantity of atropine had been injected, but from the effect it had on a system so saturated with morphia as hers, I could judge that it must have been a very large one. I subsequently found out from the chemist (not a Randwick one) who had prepared the solution, that he by mistake had made a solution of atrop. sulph. grs. xx in 3j instead of a morphia solution of the same strength. He could not account for how he made the mistake. He is a qualified, sober, and highly-recommended man, who to his knowledge never made a mistake before. Is not this again a case of human fallibility, which cannot be guarded against? He discovered his mistake the following morning, and at once despatched a messenger by cab with instructions not to use the solution dispensed the previous night, and at the same time sending a bottle of solution of morphia.

Supposing the patient having injected only two syringesful of the sol. atrop. sulph., she must have had $1\frac{1}{2}$ grains of the alkaloid introduced into her system, and it is very probable that she had at least part of the contents of third syringe. This is truly an enormous dose, and one which I don't think she could possibly have recovered from had she not been a morphinist. The antagonistic effect of the morphia which she already had in her system undoubtedly saved her life.

The peristalsis of the intestines was paralyzed for two or three days, and large soap-and-water enemata had to be employed to evacuate them. Calomel grs. v and pulv. jalap, comp. grs. xxv had no effect.

About the treatment there is little more to be said. For relieving the accommodation spasm a solution of physostigmine was instilled into the eyes several times daily for three days. Pilocarpine gr. $\frac{1}{4}$ was injected three times the first day, but produced neither perspiration nor salivation. Prolonged hot baths were continued for a few days. On the fifth day she was well enough to go for a drive.

II.

As antagonists in toxicological respect, Husemann regards all substances which, being introduced into the organism simultaneously, or nearly so, neutralise the poisonous effect of one another. From this comprehensive frame we will exclude

all antagonism based on purely chemical action; for instance, where two substances, each of which taken separately would act as a poison, both taken together would produce no such effect, because they form an insoluble body.

The antagonism, which here will be considered, may be termed *dynamic*, i.e., the ability of a poison to counteract or neutralize another poison after they are both absorbed.

With regard to poisons which cause pathological change of tissues in different organs soon after their absorption (such as *phosphorus*), we are practically helpless. Substances having a direct antagonistic effect are not known. Effective antagonistic substances are only to be found amongst the bodies possessing a purely *functional* effect on the nervous or muscular system.

The effects on the *nervous* system of these bodies are easily measurable; they can only be of a *quantitative* nature. They are only able to increase or depress the normal energy of the functions—the quality cannot be altered. The motley, and apparently so composite, picture of many poisoning cases, is explained by the fact that each class of nerve has its own specific mode of reaction—the motor nerve, by spasm or paralysis; the sensitive nerve, by pain; the optic nerve, by notions of light, etc., etc.

The effect of poisons on the muscular system is more complicated, because here, besides the ease with which the muscles change from an inactive to an active condition, several other factors—for instance, their elasticity—have to be considered. As only few of the more important poisons have any marked effect on the contractile substance of the striped muscles, our attention will in the following chiefly be limited to the nervous system.

It is only the central and peripheric end-organs of the nerves which are affected by poisons. The nerve-trunks themselves remain intact until the death of the organism. The axis cylinders seem to be very well isolated in their myelin sheaths. There is only one exception to this rule, viz., the cocaine, which not only paralyzes the end-organ of sensitive nerves, but also interrupts the conductive power of *centripetal* nerves.

In consequence of the value a knowledge of the reciprocal antagonism of the strong poisons has in the treatment of poisoning cases, the investigations in this field have been considerable, and the best and most modern ones are chiefly due to Husemann and Rossbach, in Germany, and Bennett, in England.

From the numerous experiments of these investigators, a few *general rules* may be deducted:—(1.) Any *complete* antagonism between

two substances such as to neutralize one another, like plus and minus, when introduced into the organism in toxic doses, is not discovered. They may weaken the effect of each other, but the effect of either one or the other always remains supreme. (2.) It is, as a rule, the *paralysing* poisons which remain victorious. If equivalent quantities of two poisons act on the same nervous apparatus in diametrically opposite directions, the one paralysing, the other stimulating, the apparatus in question ceases to act. Consequently, a case of poisoning in which the stimulating effect is predominant gives, as a rule, a better prognosis than one in which the paralysing effect is supreme.

It is furthermore evident that much of what, at the first glance, seems to be the most typical antagonism, in reality is not so. Closer analysis leads us to divide the dynamic antagonism into two varieties, viz., the *physiological* and the *therapeutical* antagonism.

A physiological antagonism exists when two poisons combat one another on exactly the same point of attack, both acting on the same nerve elements or the same muscle cells. For instance, if we inject into a patient $\frac{1}{4}$ to $\frac{3}{4}$ gr. of pilocarpine, profuse perspiration sets in in a few minutes, because the excretory nerves of the sudorific glands are greatly stimulated. If, simultaneously with the pilocarpine, or after the commencement of the perspiration, $\frac{1}{10}$ to $\frac{3}{10}$ gr. of atropine is injected, no perspiration takes place, or it soon ceases, because the atropine paralyzes the same nerve-ends that the pilocarpine stimulates. This is true *physiological* antagonism, and is an example of how the paralysing poison preponderates.

The following is an example of *therapeutical* antagonism:—If a couple of drops of a solution of atropine are instilled into the conjunctiva, the pupil becomes dilated, because the ends of the oculomotor nerve in sphincter pupillæ are paralyzed. If a few drops of a solution of physostigmine are instilled, the pupil contracts; and yet the physostigmine acts on quite other elements than the atropine. It leaves the ends of the oculomotor nerve intact, and acts direct on the *circular muscular apparatus of the iris*. The antagonism in this instance is only apparent, although seemingly plausible enough to immediate observation. This, we may call it *spurious*, antagonism is most frequently met with in highly complicated organs such as the iris and the heart. It may be very useful, and deserves consideration with regard to the treatment.

A well-defined section of poisons comprises those to which belong the strychnine group. The more important of these, besides the strychnine

itself, is the brucine, found in different species of strychnos, and the thebaine, one of the opium alkaloids. And belonging to this group may also be included the toxine produced by the tetanus bacillus. Their characteristic is, that they all produce tetanus, even in very small doses. The symptoms are generally sudden, tonic contractions of all the skeleton muscles, with short remissions, frequently following one another with the swiftness of lightning, and rarer but longer-lasting intermissions. Death is caused either by exhaustion or by suspension of respiration during a long attack.

The cause of the tetanus is the extreme increase of the reflex irritability of the whole nervous system, principally in the spinal chord, but also in the brain. The attacks are induced not only by touch, but also by impressions on the eye and ear, such as a flash of light or a loud sound—a proof that the brain is involved.

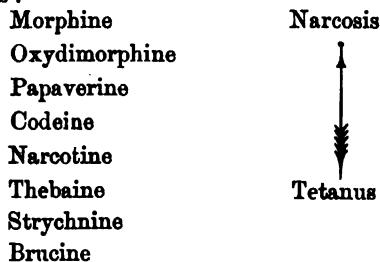
The object of treatment in strychnine poisoning is naturally to bring about a cessation of the spasms, and for this purpose are generally employed narcotics belonging to the paraffin group, chiefly chloroform and hydrate of chloral. These drugs are exactly the physiological antagonists to strychnine. They blunt the irritability, and finally cause narcosis of the very same centres that the strychnine stimulates. By careful administration it is sometimes possible to just reach the point in which the effect of the strychnine is about neutralised, and the narcosis not yet has reached the dangerous stage. Not a few cases are reported, in which life has been saved by repeated injections of chloral after doses of strychnine, which undoubtedly would have proved fatal without this treatment.

Strychnine tetanus may also be abated by the administration of curare, but this is no longer a physiological antagonism, as the remedy acts on quite other organs than those affected by the strychnine. Curare paralyzes the end organs of the motor nerves in the periphery, and the circle of conduct being thus interrupted, the impulses from the centre cannot reach the muscle, and the spasms must cease. For several reasons curare is not very suitable for therapeutic use—amongst others, because the drug is very inconstant, and it is therefore difficult to graduate the dose.

In strychnine poisoning, it seems obvious to have resort to opium and morphia, and they are sometimes used, but scarcely with the same success as chloral hydrate. The explanation is this: In cases of morphia-poisoning in human beings we virtually see only the first act of the play. When the narcosis has attained a certain depth, the victim succumbs. In animals, which have more power of resistance against this poison,

we see the second act. A large dose of morphia produces in most mammals and lower animals as the first effect narcosis; when this has lasted for a time—often several hours—the whole scene undergoes a wonderful change. The animal, which has been lying in deep coma, is suddenly seized by convulsions, light at first, but gradually increasing in strength, and finally resulting in long tonic spasms, which in no way differs from, and in strength equals, any strychnine tetanus. The first signs of similar symptoms have sometimes been observed in cases of morphia poisoning in human beings shortly before death, chiefly in children.

Morphia consequently possesses a tendency to produce spasms, and although this generally remains latent, in cases where we aim at combating spasms, this tendency may probably render the alkaloid less suitable. If this is true of morphia, much more so is it of opium. Amongst the alkaloids of opium, morphia is the one in which the narcotic effect is most predominant. Von Schröder has ranged the opium alkaloids in a series, the first link of which is morphine, the last thebaine. For each link downwards in this series, the narcotic effect on the nervous system decreases and the tetanogenic effect increases, so that the last link, the thebaine, in this respect is equal to the alkaloids of the strychnine group. The opium and strychnos alkaloids consequently form a continuous scale without abrupt intermissions:



From the above, it seems evident that in strychnine poisoning, opium is not the most rational remedy.

Atropine is an alkaloid, which on account of its multifarious effects is particularly suitable for the study of antagonism. Its physiological actions are, according to Schmiedeberg, briefly: It affects certain territories of the central nervous system and also several nervous organs in the periphery. In these organs it paralyzes the nerve-ends, while in the central apparatus we first observe excitation, subsequently paralysis. For curative purposes we chiefly aim at the peripheric effect.

The peripheric organs affected by *Atropine* are: The accommodative apparatus of the eye, the controlling nerve of the heart (vagus),

different glands, and finally the ends of the motor nerves in organs possessing non-striped muscles, particularly the intestinal canal and the bladder.

In the eye the ends of the oculomotor nerve in the sphincter iridis are paralyzed, and the pupil is dilated. The effect is strictly local, depending on the molecules of the atropine coming into direct contact with the nerve-ends. By instilling it carefully into one corner of the eye, Flemming observed dilatation first occur in the corresponding half of the pupil. In the ciliary muscle also the nerve-ends are paralyzed and accommodation becomes impossible.

The secretion of all true glands is suspended, because their secretory nerves are paralyzed. The secretion from the large salivary glands is stopped, likewise that from the numerous mucous glands in the mouth, fauces and larynx. The patient experiences the well-known dryness in the throat, and becomes hoarse or aphonic, because the dry vocal chords can only vibrate with difficulty. In the intestinal canal rest is generally produced by the paralyzing effect on the vagus. In the heart also the ends of the vagus are paralyzed, but the result here is the reverse of rest, because the vagus in this organ acts as retarding nerve. The action of the heart is accelerated. This effect of atropine is very differently pronounced in different species of animals, according to the degree of normal retardation under which the heart works. In man this is very strong, and if suspended by the effect of atropine, the pulse frequency sometimes increases to more than the double of normal. Our heart, accordingly, under ordinary circumstances works under very heavy retardation.

The most complete antagonism yet known to exist between two poisons is that of *muscarine*, the alkaloid contained in the toad-stool *Agaricus muscarius*, to atropine. Their effect to one another is exactly as black is to white. Muscarine causes spasm of the ciliary muscle, contracts the pupil, produces profuse perspiration and salivation, strong peristalsis, and finally stops the action of the heart through irritation of the vagus. It is easy to predict which of these two alkaloids will be victorious by simultaneous introduction into the organism; the paralyzing atropine will prevail. This has been confirmed by experiments on animals. An injection of atropine speedily removes the symptoms of not too large a dose of muscarine, not vice versa.

The alkaloid which most frequently causes, not only chronic, but also acute poisoning, is *Morphia*. In man, after a large dose of morphia, the first effect is to decrease the susceptibility of pain. Subsequently drowsiness sets in, the power of thinking is impaired, perception

becomes disordered, and before sleep comes there is often a pleasant stage of semi-intoxication, probably caused by an irregular and inordinate action of the brain, a dislocation of the equilibrium of its different functions. The next stage is lethargy or stupor, which in the beginning is only light. Changing impressions on the senses, active and passive movements, such as walking the patient about in the room, may yet prevent narcosis. Gradually, as the effect of the drug increases, the paralysis of the cerebrum becomes more complete, the stupor changes into sopor and ends in deep coma, from which it may be impossible to rouse the patient.

Even before this stage, the pupils gradually become contracted to the size of about a pin's-head, and do not dilate in the dark. The respiration commences to suffer, the movements of the thorax become superficial and less frequent. The patient becomes cyanotic; mucus accumulates in trachea and bronchi; but in spite of the increase of carbonic acid in the blood, the pupils remain contracted. Finally the action of the heart is affected. The motor ganglia in this organ resist the effect of morphia for a considerable time, but at last they also succumb to the narcosis. The pulse becomes weak, infrequent and irregular, and death comes very quietly, or shortly before the end light muscular contractions set in as an indication that a spastic attack is on the road.

As an antagonist to morphia, atropine has long been known to be the most powerful. In experiments on animals the effect is very striking. It is possible by the aid of atropine to recall to life animals poisoned by morphia, which could not be saved by any other means. In human beings also, atropine will sometimes save life in apparently hopeless cases. A case reported by Binz will serve as an illustration.

A powerful young man had injected into himself four grains of morphia. When the physician arrived the patient was very cyanotic, respiration and pulse weak, infrequent and irregular, and the pupils were contracted ad minimum. Deep coma. Temp. in rectum 96 degrees. Artificial respiration was induced and $\frac{1}{10}$ gr. atropine injected. In half an hour no improvement. Atropine $\frac{1}{4}$ (one-sixth) gr. was injected, and in fifteen minutes the action of the heart became more regular, yet only forty per minute, and the cyanosis disappeared. During the following twenty minutes again $\frac{1}{4}$ gr. of atropine was injected, and in ten minutes the pulse rose to 60 and the pupils assumed normal size. In one and a half hours the pulse rose to 80, and the pupils became dilated, but there was still deep coma. Gradually the reflexes were restored, he became

conscious, and on the following morning was well. The pupils remained dilated a few days.

Johnston in Shanghai observed in the course of seven years more than three hundred cases of acute opium-poisoning, most of them attempts at suicide. In the more severe cases, treatment with all sorts of stimulants was perfectly useless; only by injecting atropine in large doses he several times succeeded in resuscitating apparently moribund patients.

The question now remains: Of what nature is the antagonism of atropine to morphia? We will keep in mind the above case.

The pupils of the patient were very much contracted. After injection of atropine, they first regained their normal size; afterwards, they became dilated. This is no physiological antagonism. How morphia causes the pupils to contract is not known. It is, at any rate, not through local effect on the ends of the oculomotor nerve, for instillation of a solution of morphia into the eye causes no contraction. The pulse had gone down to below 40, and subsequently rose to 80. That the pulse was retarded was due to the paralyzing effect of the morphia on the automatic motor ganglia of the heart, so that, although the heart muscle was still capable of work, it did not receive the proper impulse for continued action. Atropine paralyzes quite other elements, viz., the ends of the vagus, and thus removed the brake that normally retards the action, and this being removed, the heart was enabled to work satisfactorily, though the original motor power was weakened by the morphia. Consequently, neither was this effect due to physiological antagonism. The respiration improved, and the cyanosis disappeared. This was probably due to the improved circulation.

The result is, that even so obvious, and, for the treatment, so valuable a contrast as that between morphia and atropine is no true antagonism in a physiological sense, and it serves as an example of how two poisons, both with paralyzing effects, counteract one another because they act on different organic elements.

As representatives of the large number of chemical bodies known as the *narcotics of the paraffin group*, we will take *chloroform* and *ether*. They all have a similar effect on the organism. In large doses they paralyze the central nervous system—first, the brain. Sleep is induced, and voluntary movements cease. Subsequently, the spinal cord is also affected, and reflex movements no longer take place. Then the respiratory centre in the medulla oblongata gives way, and finally the motor ganglia of the heart. The danger in ether and chloro-

form narcosis must consequently first be expected from the respiration. If the heart stops before the respiration has ceased, it is an almost sure indication that the narcosis has not been skilfully conducted. If the chloroform vapour is inhaled too concentrated, the pulmonary veins carry direct to the heart blood heavily charged with chloroform, and the heart may thus be paralyzed before the brain is affected. The action of the heart then stops, while the patient is yet conscious.

As a rule, the patients recover even from the most alarming asphyxia, because the poisons in question are volatile and quickly eliminated from the system; but it would, nevertheless, be highly desirable to have antagonists by which the paralysis might be counteracted. Such remedies have been eagerly sought for, but in vain. There are plenty of substances which, in the unnarcotized man or animal, incite the medulla oblongata, and especially the respiratory centre; but if we attempt to utilise this effect in deep narcosis, they almost invariably fail, and they are practically useless. It is again the same rule—the paralyzing poison has the predominant effect. In strychnine poisoning, we can do a great deal of good by using chloroform or chloral, but not *vice versa*. Both clinical experience and laboratory experiments show that mechanical artificial respiration is the only tolerably effective measure in asphyxia from narcosis. Against the much less-frequently occurring heart-failure under narcosis, we are also in want of a reliable remedy.

A peculiar circumstance with regard to narcosis deserves mention. When a patient under the effect of chloroform commences to breathe superficially, or even ceases to breathe, we give him subcutaneous injections of ether, although the two substances act on the respiratory centre in exactly the same manner. Still more paradoxical it seems to inject ether, when ether is the narcotic employed. The patient, who is in danger of his life through inhalation of ether has still more ether injected into him. Yet we often see undoubted effect, and, what is more, it is immediate, momentaneous, taking place before the liquid can have been resorbed. The explanation is, probably, that the ether, which, injected under the skin, commences to boil, is a strong irritant to the cutaneous nerves, which, per reflex, cause respiratory movements.

We have, in this instance, the extraordinary fact that the same substance acts as its own antagonist—an illustration of how imperfectly the notions of physiological and therapeutical antagonism cover one another.

Literature: E. Foulson, *Prüfungsbeantwortung*, Norsk Magazin for Lægevidenskaben, Sept. 1892. Schmiedeberg, *Arzneimittellehre*, Nohnagel, *Arzneimittellehre*, and others.

ON THE RADICAL CURE OF INGUINAL HERNIA, WITH SPECIAL REFERENCE TO KOCHER'S METHOD.

(Read before the Queensland Medical Society.)

By BRIGADE-SURGEON J. THOMSON, M.B., EDIN.,
PRINCIPAL MEDICAL OFFICER, QUEENSLAND DEFENCE FORCE.

MALGAIGNE has stated that one male in every thirteen and one female in every fifty-two, or, practically, that one individual in every thirty, suffers from some form of abdominal hernia. How he obtained his information I cannot tell, and whether, if the same district from whence he derived his statistics was again examined, similar results would now obtain, I do not know; but I think his figures are not applicable to Queensland. It must be extremely difficult to arrive with any exactness at the number of ruptured persons in a given population, and I think only the very roughest estimate can be formed. But such an estimate seems possible if the number of trusses sold annually can be discovered; and, thanks to the information kindly placed at my disposal by the wholesale houses in Brisbane, and by the instrument makers and others, not more than about 2,500 trusses are annually disposed of. It may be that two or three houses in other towns of the colony import; but, from what I can gather, about 2,500 represents the Queensland annual trade in trusses. Now, the estimated population on December 31, 1892, was 451,297, and this would be one truss, or one ruptured individual, in every 168; but allowance must be made for errors. Many who ought to, do not wear trusses. Again, the life of a truss varies greatly; with a labouring man, it seems, the common truss only lasts about nine months; with a leisured man, a good quality instrument may be worn a couple of years or more: children require them frequently—infants, about every six or eight weeks. So, it may safely be accepted that not more than about one in one hundred and thirty of our Queensland population is ruptured, and that is surely a small percentage, considering the lankiness and slimness of many of our natives, and the laborious occupations which many of them pursue—timber-getting, rail-splitting, fencing, shearing, etc., not forgetting hard work in the saddle for long hours. No one can deny the value of a well-made and well-fitting truss—the protection it affords, the comfort it bestows; neither can one deny its many inconveniences. Small wonder is it, then, if efforts have been made by surgeons, from time immemorial, to devise some method which would

effectually dispose of the hernia and dispense with the truss.

Some of these attempts at a radical cure appear very amusing to us of to-day. I copy, from an old work on surgery of 150 years ago, Heister's, which I possess, the following:—

“Another method of reducing the enterocele is by colotomy, or incision, which is often practised by mountebanks, who generally deprive the patient of his testicle in the operation, but is condemned by all prudent surgeons, upon many accounts, especially as it deprives them of a most necessary organ by a dangerous and excruciating operation, without any advantage.

The patient is first laid upon a table, with his head inclined backwards, his hips elevated, and all his limbs and head secured from moving by fastening them with ligatures to the table, or by holding them with the hands of assistants. The operator then protrudes the intestine into the abdomen, after which an assistant compresses the ruptured part or dilated ring with his hand. The anterior part of the scrotum of the affected side is then elevated and opened by a longitudinal incision; the sides of the wound are then dilated, so as to discover the process of the peritonæum, which is then separated, together with the testicle, from the adjacent parts, by the fingers, and taken out of the scrotum, to the great torment of the patient. The distended part of the process of the peritonæum is then drawn down and firmly tied together with the spermatic vessels by a silk ligature; but others divide the spermatic vessels first, and then separate the scrotum from the testicle, which they conceal in one hand from the eyes of the assistant. The part is then dressed with lint, plaster, compress, and bandage, and dressed the following days with *Ol. Ovar. Hyperici*, or some other vulnerary balsam, till the ligature which tied the process of the peritonæum and spermatic vessels is digested off, which usually happens six or seven days after the operation, the rest of the cure being perfected as in other wounds. And thus the patient either recovers, or dies of a fever and convulsions, from the severity of the operation.” Thus is described “*The Method of Performing Colotomy used by Mountebanks.*” The surgical quacks of that age must have been more daring than their descendants of to-day, who restrict themselves to bone-setting and abortion-mongering.

Another method, the invention of a physician named Little, is worth quoting:—“After the rupture is reduced, he applies oil of vitriol above the os pubis, in such quantity as may quickly eat through the skin, for the larger

eschar it made, the more effectual and useful it would prove; for which reason the application was repeated for two or three days, that it might the more effectually corrode the skin, removing the old eschar every time before the application of the oil of vitriol, that it might the more effectually penetrate. The eschar was then dressed with *Ozycroe & Paracels*, mixed in equal parts and spread upon leather retained with compresses and bandages, the use of which plaster was to separate the eschar in order to cure the ulcer. He had five thousand pounds given him for the discovery of this method by King George I., notwithstanding which it quickly became contemptible and in disuse among most of the English surgeons."

It would be impossible for me, even in outline, to give a history of the various methods which have presented themselves to the surgeon from time to time, and which have contributed, little by little, to place in the hands of the *fin de siècle* operator plans which seem to fulfil all that the patient demands. I regret that my acquaintance with the literature of this important subject is limited, and that the very names of many of those who have laboured, and laboured originally, in this branch of the surgeon's art are unknown to me. But I will hurriedly review a few of those recent surgical procedures of which I have had some little experience.

Twenty years ago—aye, ten years ago—Woods' operation, introduced in 1863, for the radical cure of hernia, was the recognised one—practically, the only one. It was a sort of semi-subcutaneous method of lacing up with stout copper wire the inguinal canal after having invaginated the sac. In the hands of its author, this operation achieved a measure of success. He kept notes of about 300 cases. In the first 200 there was practically one failure to one success, and a risk to life; in the remaining 100 the success was greater, for a more careful selection of cases was made. What constitutes "success" from Woods' point of view, I do not know; I should have thought the ability to dispense with the use of the truss; but he somewhat ingenuously states in his article in 1885:—"Many wore no trusses whatever" The italics are mine. This operation did not seem to take. Bryant said: "The surgeons who perform it are not numerous, nor the cases abundant." What little experience I had of it—I think I saw three cases—was not encouraging, and I never adopted it. Its plan is faulty, and so I believe is that of every operation which does not separate the sac from the cord and scrotal tissues, and deal independently with this process

of the peritoneum. Still it was ingenious, and the application of the wire was cunningly devised.

Next came Spanton, in 1880-82, with a new operation; but it was simply a modification of Woods—certainly not an improvement; there was the usual incision, with the attempted invagination of the sac, and the canal-walls, instead of being laced up, were screwed together with an instrument which to all intents and purposes was nothing but our familiar friend—the corkscrew. After being introduced, its point was protected by an indiarubber ball, and it was worn a week, or until plastic inflammation had occluded the track. I have operated by this method, but unsuccessfully; it was quite as faulty and less ingenious than its predecessor, and the best I know of it is the happy way in which its author refers to the selection of his cases. "In the same way some young women are proper subjects, as in one instance in which I operated, because the patient wished to be married, and did not like to do so with a hernia existing. I am happy to say that in this case the young lady lost her hernia and obtained a husband within a very short period, much to her gratification in every way." He also strongly advocates a careful selection of cases.

Who first devised the separation of the sac? I do not know; one might almost suspect that it was suggested, if not adopted, by our old friend Dr. Laurence Heister, from whom I have already quoted; but the first to recommend the torsion (after separation) of the sac was Ball of Dublin, in 1884, and to him is, I fancy, due the credit of having advanced by a big stride the progress and permanent success of the operation for effecting a radical cure. Adopting Lawrence's theory that "one of the most fertile predisposing causes of hernia is an abnormal laxity and fulness of peritoneum in the neighbourhood of the hernial opening," he argued that torsion of the sac would tighten up and throw into ridges and furrows the loose peritoneum around the abdominal opening. He admits the isolation of the sac is tedious from its being spread out over the compound structures of the cord—a difficulty I have frequently found, as I shall subsequently explain. How, then, some of the writers speak of invaginating the sac either with or without an incision, pushing it into the canal, and thereby blocking the rings, is to me a mystery. In all the cases I have seen, the sac has been practically an integral part of the tissues composing the spermatic cord, so closely adherent as to be with great difficulty isolated, and it would be utterly impossible to deal with it as these authors propose. I have not operated by Ball's method, which, after the

torsion, consists in placing a gut ligature round the neck of the sac and stitching its fundus to the external ring; but I have, and successfully, by MacEwan's plan, which deals with the sac by puckering it up with a long ligature passed backwards and forwards half-a-dozen times or more from fundus to neck of sac; the needle carrying the ligature is then passed along the canal, say for a couple of inches, and through the oblique muscle to the anterior abdominal wall, where the ligature is seized and drawn upon, when the sac folds up like a concertina or bellows camera, and is then carried up into the inguinal canal, which it blocks, being hard and tough, like a cork in a bottle. We have now passed two stages on the road to what I believe to be success, viz, separation or isolation, and torsion or twisting of the sac. The third stage has to deal with its final adjustment and fixation. Ball, as I have described, left his sac in the inguinal canal; MacEwan drew his sac well up the canal by a ligature through the abdominal muscles; Kocher drags his sac up the canal, through the muscles and plants it permanently on the anterior abdominal wall, and by so doing claims that he improves upon Ball's scheme for tightening the peritoneum around the abdominal opening by stretching it in a direction opposite to the direction of the canal and the course of the hernia; and I think his claim must be admitted.

This operation Professor Kocher introduced in 1892, and it is the one I present to you. I have operated, I think, on fourteen cases in hospital and private practice, on young boys, lads, middle-aged and old men. I have had no female patient. I have made no selection of cases, nor have I refused any, and I think you will find that I have had some complications to deal with. I am perfectly satisfied with the results, and I believe, both theoretically and practically, the operation is worthy your consideration. It has received the attention of others of the Hospital staff and a goodly number of operations have been performed, with, I understand, uniformly excellent results.

The operation lasts perhaps an hour or an hour and a quarter. In parts it is more tedious than difficult, and requires a good deal of patience, with attention to minor matters. In my description I have divided it into three stages—the incision, the separation of the sac, and its treatment and fixation; and with each stage I shall refer to complications or difficulties which have arisen, and to practical tips which I have found useful.

THE INCISION.

This naturally follows the direction of the inguinal canal and the course of the sper-

matic cord, and when completed may be from four to six inches long, perhaps in some cases even a trifle more; but it need not be made at once, and I have found it convenient to increase the length of the incision as the progress of the operation required, and for that purpose have divided it into two stages, taking the external inguinal ring as the point of departure in both.

1st. From the external ring downwards and inwards, following the cord, to permit of the separation of the hernial sac.

2nd. From the external ring upwards and outwards in the direction of Poupart's ligament, after the sac has been separated, to allow of its further manipulation and final fixation.

The vessels likely to be cut in these incisions are the superficial external pudic and the superficial epigastric, and it is well to see that these are either ligatured or thoroughly controlled, for the only trouble I have had was from hæmorrhage in two cases; when in the first the leakage was from the epigastric, and the blood percolated into the cellular tissue in the iliac and lumbar regions of the affected side, giving rise eventually to an abscess; while in the second the oozing was from the pudic, and the scrotum and penis were enormously distended with infiltrated blood, the former as large as a child's head, the latter three or four times its normal size, and both as black, ay, blacker than any of the Melanic races of mankind could produce. I had to re-open the incision, scoop out large and decomposing clots of blood, irrigate, drain, and let heal by granulation. These are the only accidents I have had which have delayed to any marked extent the progress of the cases, so I especially warn you to watch for bleeding points, and arrest them.

THE SEPARATION OF THE HERNIAL SAC.

This is the most tedious part of the operation, and the part also requiring the most delicate manipulation. Like the incision, it may be divided into two stages. 1st. The separation and isolation of the sac from the structures of the cord. 2nd. Its separation from the walls of the inguinal rings and canal.

1st. I find the separation from the cord is best effected by a process of tensing out rather than by one of careful dissection. This teasing out is sometimes a matter of great simplicity, the thin transparent hernial sac lending itself most willingly to the process. At other times the work is anything but easy; the sac may not be readily recognised, its adhesions may be more complicated, or its relations to the other structures of the cord be intricate, and so what takes only a very few minutes in one case is lengthened tenfold in another.

In two instances I found the sac so very thin that part of it was mistaken for connective tissue, and teased asunder, eventually permitting the escape of a piece of omentum; this was returned, and no harm ensued, for both these healed completely by the first intention. In another case, I found it quite impossible to separate the sac; it was adherent to the cord, close to the testicle, the result probably of some old inflammatory action, and a piece of omentum was also caught with it. I opened the sac, snipped across the bit of omentum, returning what I had loosened, leaving behind what was caught, and this case also healed at once. In a few cases I have had to deal with congenital herniæ. It becomes very tedious to endeavour to work out the loop of sac, which for our purpose does not really exist, and in these two cases it was not until the sac had been ruptured that the anatomical condition was discovered. However, in both, the sac or what remained of it was treated in the usual way, and all went well. I did not interfere with the pieces of sac which enveloped the testicle, and I am not aware that that organ suffered from the neglect; but I believe elegant surgery demands that I should have stitched up the bag, in the endeavour to form a tunica. In a somewhat complicated case, there also existed a small hydrocele containing about two ounces of fluid, which by the way I did not interfere with, and an old varicocele which had undergone spontaneous cure, the blood in the tortuous veins having dried, and become crystalline and brittle. These veins and their contents were removed, and the patient made an uninterrupted recovery.

In different subjects, the thickness of the sac varies greatly. Usually it is as I described it—thin, delicate and transparent; but again it may be tough and thick, easily separated and not readily injured. In every case on which I have operated, during the separation of the sac the testicle has been again and again drawn from the scrotum—in a few instances much more freely and for a much longer time than I liked, but on no occasion with any evil results. In fact, none of the irregularities, complications, or accidents which I have encountered and referred to, seem in any way to have interfered much with the rapid union of the incisions and success of the operations. Having now loosened the sac from its scrotal attachments, the second stage of its separation—namely, from the inguinal rings and canal—must be completed, and this is very simply done by holding the sac firmly in one hand, while the forefinger of the other is thrust into the canal and freely rotated between its walls and the pedicle, if it may be so called, of the sac.

There is nothing to note in connection with this act, except perhaps the marked obliquity of the canal in the majority of cases. One would naturally look for a *direct* communication with the abdomen, and so, of course, you get it; but the oblique canal has been the most frequent. I am not referring in this to the anatomical position of the epigastric artery, which is supposed to establish the difference between direct and oblique herniæ.

Up to this point, the operation has been identical with the requirements of other and numerous methods recommended and adopted for the radical cure of inguinal hernia, but now the peculiarity of Kocher's plan comes into requisition, and the subsequent treatment and adjustment of the sac appears to accomplish what its author claims for it, namely, "the stretching of the peritoneum in a direction opposite to the direction of the inguinal canal and the course of the hernia, and the fixation of the peritoneum in a much more firm and in a more permanent manner."

THE FIXATION OF THE HERNIAL SAC.

You remember, when referring to the incision, I divided it into two stages. It is now necessary to complete the second—to lengthen the incision upwards and outwards in the direction of Poupart's ligament, for a distance of perhaps three inches, so that the aponeurosis of the external oblique muscle be freely exposed. I find this can be most readily effected by a pair of stout scissors. It being completed, a forefinger is thrust as far as it will go—say, from two to three inches—along the inguinal canal, keeping nearly parallel with, but of course above, Poupart's ligament. Then, when the tip of the finger is felt beneath the aponeurosis of the external oblique muscle, a small opening is made through the muscle to the finger, sufficient to permit the entrance of a pair of fine sinus forceps; the finger is withdrawn and the forceps are gently passed on, until their tips emerge from the external inguinal ring, where the bag end, or fundus of the hernial sac is seized and is drawn up through the inguinal canal and well out through the small opening on to the anterior abdominal wall. It is steadily twisted until it becomes a hard coil, and is then drawn well down and firmly laid over the external oblique muscle, following the source of the inguinal canal and covering the external ring and opening. I am not aware that any peculiarity has marked any of my cases during this treatment of the sac. The only matter that I have noticed is a difference in the oblique muscle; sometimes I have found it fleshy and, of course, thick; again, aponeurotic and thin. I have always

cleared away fat and connective tissue, so as to deal with a clean, dissected-looking muscle, and I have found no difficulty in this part of the operation. The sac has now to be fixed in its new position by the application of sutures, and no better needle has been devised for their introduction than the one I show you.

At one time I used silk for the stitching, but abandoned it, as occasionally what I suspected to be suture abscesses, or necrosed tissue from excessive tension resulted, and, without giving rise to any anxiety, union by the first intention was delayed by keeping pin-holes in the line of incision. I now employ fairly stout catgut, and introduce as many as eight or ten sutures, each about a quarter of an inch apart, and I have no trouble whatever. An assistant keeps the twisted sac tight and in proper position, and the stitching begins at the upper and outer corner. I pass the needle from below, picking up about a third of an inch of aponeurotic and muscular tissue, including perhaps some of Poupart's ligament. The needle is then thrust through the twisted sac, and then about another third of an inch of tissue is caught up above the sac, and so on the stitching goes, until the pillars of the external ring are brought well together; and I take it that the careful treatment and seclusion of this ring is an important factor to secure success. The sutures are now tied in the order in which they were introduced, and when the knotting is completed the twisted sac has almost disappeared, being overlapped in its whole course, both above and below, by the tissues caught up in the stitching; and at last the canal and its openings are blocked; the internal ring is closed by the twisting of the neck of the sac, the tension of the peritoneum and pressure of the sutures. The canal no longer exists, for its lumen is deranged by the solid twisted cord which overlays it, and the external ring is sealed up by the sutures, and the sac, which, if too long, by projecting beyond this ring, may be cut away—a proceeding I have found necessary in about half my cases. The skin incision is treated in the usual way, and a large pad and firm spica applied. The patient is kept quiet in bed for a week, when, if symptoms have not demanded it before, the wound is looked at for the first time, and ought to be found healed. A second week is spent in bed; the third finds the patient moving quietly about, and during the fourth he bids you good-bye.

The operation, I need hardly say, is conducted under the strictest aseptic and antiseptic precautions. This co-partnership of the *a* and the *anti* sepsis may not harmonise with the opinions and teaching of many surgeons, but my experience

in some things leads me to fancy a "blend," and I blend my precautions, and, I think, successfully. Except in one instance, when there was a little inflammatory threatening about the scrotum and its contents on the affected side, which happily ended in resolution, I have had no trouble whatever with either the cord or testicle.

The questions you naturally ask—and they must be answered in the affirmative, else the credit of the operation is at stake—are:—

Can the patient throw his truss away? Can he resume his labours, whatever they may be—labours which may require, in the semi-bent position, muscular efforts, with straining? In other words, is the operation what it professes to be—a radical cure for hernia?

With the few cases which I have had, the total disappearance of some of them, and the shortness of time for observation in others, it would be rash of me to dogmatically answer "Yes!" and yet "Yes" is my only reply. Yes, perhaps reservedly, but still, Yes! I should insist that the patient wear a large pad and spica—not a truss—for three months after the operation, and, permitting light work, should prevent any severe labour for at least six; and then, if there was a "give," I should expect it on the previously unaffected side, and not on the one which had been closed up by operation.

Gentlemen, I submit Kocher's operation to you, believing that in every particular it fulfils what is claimed for it, and that Watson Cheyne's language applies most pertinently to it when he says, "the radical cure of inguinal hernia now leaves little to be desired as regards both immediate and permanent results."

ABSTRACTS.

NOTES ON CURRENT OPHTHALMOLOGY, LARYNGOLOGY, AND ALLIED SUBJECTS.

By KENT HUGHES, M.B., M.R.C.S.E., OF MELBOURNE.

CAUTERIZATION OF THE SCLEROTIC IN DETACHMENT OF THE RETINA.—*Preas in Revista de Ciencias Medicas de Barcelona*, February 25th, 1894, reports three cases of detachment of the retina in which the sight was improved and the field of vision enlarged, for periods of time averaging six months, by repeated applications of thermo-cautery points to the superficial layers of that portion of the sclerotic which was nearest to the point of detachment. He claims that reaction is very moderate.—*Int. Med. Magazine*, July, 1894.

ACTION OF HYDROCHLORATE OF SCOPOLANINE ON THE EYE.—Dr. Pooley, from a brief trial of scopolamine, concludes that—(1.) It is of value as a mydriatic and cycloplegic in the examination of anomalies of refraction. (2.) Its action is more complete than homatropine, and of same duration. (3.) It produces toxic

effects sooner than homatropine. In three cases he noted toxic effects, all of them occurring in patients who had bought the drug themselves and used it at home. In a girl of thirteen, who had used 1-5th per cent. solution six times in each eye, the toxic symptoms were staggering, articulation "thick and drunken," very dizzy, and at times she seemed out of her mind; constant working of lips and muscles of face; pulse 125; heart's action irregular; formication of feet; dryness of throat. Recovery in two days.

ADENOID VEGETATIONS.—Dr. Chiari (in *Wiener Klinische Wochenschrift*, June 7th, 1894) advocates the removal of the growths by cold wire snare through the nose, and controlled by means of posterior rhinoscopy. Cocaine anæsthesia only is employed. Bleeding is slight, and, with fairly reasonable children, no assistants necessary. Of 163 private cases operated on by snare alone, 66 were cured in one sitting, 56 in two, 33 in three, seven in four or five, and one in nine. In 24 cases the method had no, or partial, results, the cause of failure being narrow nostrils. Two children of 3 years, two of 4 years, eleven of 5 years, five of 6 years, and twelve of 7 years, were easily operated on. This procedure is absolutely free from danger, causes slight bleeding, is followed by no reaction, is free from pain, and can be applied under cocaine.—*Int. Med. Magazine*, Nov. 1894.

Despite the above favorable report, it will be doubtful if many surgeons will be found who will abandon "finger and curette under chloroform" for Dr. Chiari's method.

SINGERS' NODES.—Dr. Knight read a paper before the American Laryngological Association, at its sixteenth annual congress, on the above subject, and endeavoured to show the difference between Türk's cases of diffuse "trachoma of the cords" and those of a single nodule on one or both cords, to which the term "Singers' nodes" should be retained. He further pointed out that by rest and astringents the voice had been so far restored that he did not feel justified in adopting bolder measures. Dr. French agreed with Dr. Knight's plan of treatment, but several other speakers advocated removal by forceps or by caustic.—*New York Medical Journal*, December 1, 1894.

LACTIC ACID IN CHRONIC LARYNGITIS.—Dr. Massei reports that he has obtained good results by using a spray of lactic acid (2 per cent. solution) six or eight times a day in tubercular inflammation of the cords.—*Rev. de laryng., d'otol., &c.*, June 1, 1894.

A GOLD COIN ENGAGED IN THE VENTRICLES OF THE LARYNX.—Dr. Roaldes (New Orleans) describes an interesting case in which such resistance was offered, that after grasping the coin with Schrötter's forceps, and feeling that his hold was slipping, he put aside the mirror, and with his left hand pressed on the handle of the instrument, and then jerked out the coin.—*New York Medical Journal*, November 3, 1894.

SUBGLOTTIC MYXOMA.—Dr. Knight records a case in which the growth was sessile, and involved the entire circumference of the windpipe from the under surface of the vocal cords, to half an inch below the third tracheal ring. It was removed by opening trachea and curetting. Tracheotomy tube was removed on third day.—*New York Medical Journal*, December 1, 1894.

TURBINAL VARIX.—Mr. Wyatt Wingrave, in an able paper, discusses the above condition, which he defines

as a particular form of hypertrophy, which involves the posterior half of the inferior turbinal body, at length, and with great attention to detail, especially as regards its morbid anatomy and pathology. He classifies the varieties under four chief forms: Vascular, mucoid, lymphoid, and glandular. He figures an improved ring knife (Carmelt Jones), which he uses for removal, in preference to a snare.—*Journal of Laryngology, Rhinology, and Otology*, December, 1894.

SHORT EXTRACTS FROM FOREIGN CURRENT MEDICAL LITERATURE.

By C. A. ALTMANN, F.R.C.S.E., OF PORT LINCOLN, SOUTH AUSTRALIA.

THE POISONOUS CONDITION OF THE BLOOD SERUM OF WOMEN SUFFERING FROM ECLAMPSIA. — (Chambreleut, *Gaz. Med. de Paris*, Nos. 31 and 32.

Bouchard found that the urine of a healthy person is a poison to animals, 45 grammes per kilogramme of body weight being sufficient to cause the death of a rabbit. This fact is a clear proof that the kidneys separate poisons which otherwise would collect in the body. And as Bouchard also found that the poisonousness of the urine is considerably diminished in eclampsia, we may safely conclude that in this disease poisons are retained in the body. The urine of a healthy person is three times more poisonous than that of an eclamptic. Chambreleut has recently examined the blood serum of eclamptics with regard to the degree of its poisonousness, and found that 3 c.c.s. per kilogramme of weight were sufficient to cause death in rabbits, whereas it required 10 c.c.s. of the serum of a healthy person to have the same effect. But the examination of the serum of eclamptics has also a practical use, as it enables one to account for the greater or less gravity of individual cases. The number of the convulsions are not a sure sign of the gravity of the case, inasmuch as women who have almost continuous attacks of convulsions may recover whilst others with only a single attack die. Chambreleut instances the case of a woman whose serum was very poisonous, although the clinical symptoms were quite mild, and wrongly induced her physician to give a favourable prognosis. And according to Chambreleut, the amount of albumen is also a much less reliable criterion than the degree of toxicity of the serum. The question next arises how it is that the children of eclamptics die so readily. Some authors say that this mortality is due to the hæmorrhagic effusions that occur in the placental of eclamptic women. But infants die when these effusions do not occur, and occasionally even some days after birth. In one such case the existence of a nephritis could be demonstrated. If the serum of infants born of eclamptic mothers was examined and compared with that of infants born of healthy mothers, it was found that the former was generally much more poisonous than the latter, sometimes even more so than that of the mothers. This would explain why death of the infant sometimes occurs some days after birth.

SOME NEW EXPERIMENTAL STUDIES CONCERNING THE CAUSE OF ALBUMINURIA. — (Semmola, *Reforma Med.*, 1894, No. 254 and *Central Blatt für Inn. Med.*, Feb. 2nd, 1895.)

Some ten years ago Semmola promulgated (as is well known) the doctrine that the nature of albuminuria consisted in a blood dyscrasia and in certain chemical and molecular peculiarities of the albuminous bodies of the blood, which latter not having undergone the necessary changes pass readily through the filtering

apparatus of the kidneys. This much combated doctrine the author has recently again supported by new and exact experiments. On injecting egg-albumen into the circulation of the dog, albuminuria is induced, and the amount of secreted albumen is larger than the amount of egg albumen injected, and has, which is more important still, the chemical qualities of serum albumen. If the subcutaneous injections of egg albumen were continued for any length of time, serum albumen was constantly present in the bile, whereas normal bile never contains albumen. The albuminuria which follows the subcutaneous injection of egg albumen, caused, if long continued, gradual changes in the tissues of the kidney, and the latter exhibited all the changes, microscopic and otherwise, which characterize the large white kidney.

It is an error on the part of the clinician to consider the presence of albumen as an indication of an already existing nephritis. With cantharidin it is possible to excite a violent nephritis, but with very little albumen in the urine. Mercurials, on the other hand, produce an alteration in the diffusibility of the albuminous bodies of the blood, and here the quantity of the albumen in the urine may be very considerable, and yet the nephritis only very slight. But the most interesting of the results obtained by Semmola is that if the injections were made for a considerable period the characteristic form of albuminuric retinitis became developed, viz., opacity of the retina particularly in the region of the pupilla, diffuse pigmentation spots, hyaline degeneration of the retinal elements, especially of the external granular and ganglionic layers—appearances all of which disappeared when the injections were discontinued.

CONTRIBUTIONS TO THE ETIOLOGY OF NEPHRITIS.—
(Pernice and Scagliosi. *Virokow's Archiv. Bd. cxxxviii Hs. ft. 3.*)

The authors injected bouillon cultures of various micro-organisms into either the peritoneum or the blood-vessels of animals, and observed the effect on the kidneys and urine. The following are some of the most important of their conclusions:—

1. In cases of general infection the passage of bacteria through the kidneys and their excretion in the urine caused pathological alterations in the different kidney elements.

2. This pathological process begins in the local blood-vessels with endarteritis, disturbances of the circulation and hæmorrhages, followed by alteration of the malpighian corpuscles, of Bowman's capsule, and of the convoluted and straight tubes, with the formation of a hyaline amorphous substance which is secreted in the interior of the capsules and uriniferous tubules.

3. In the pathogenesis of this nephritis, bacteria causing a general infection, are most important but their toxic products, if sufficiently abundant and concentrated, may also bring about the same result.

REPORT OF FIVE (5) CASES OF ADDISON'S DISEASE, WITH POST MORTEM.—(Posselt. *Wiener Klin. Wochenschrift*, Nos. 34, 35, 36 and 38, 1894).

The author reports five cases of Addison's disease which he had the opportunity of examining, first clinically, and afterwards *post mortem*. In all of them the suprarenal capsules were found diseased; in four (4) they were extremely tuberculous, three showing the disease on both sides, and one on one side only. In the fifth case, there was a carcinomatous degeneration of the left suprarenal as well as left-sided pulmonary cancer. The causes of disease could not be ascertained in any of the cases. The most constant symptom was the steadily-increasing bronziness of the skin. In two cases there was a marked contrast between the

extreme muscular debility and the well-nourished condition of the patients. Pain in one or both hypochondria was a frequent symptom, and, in the case of carcinoma, it was confined to the affected side. In one case there was tenderness over the dorsal spine, corresponding to a softening of the spinal chord. Three cases showed mental symptoms, in one of which death was preceded by hallucinations, sopor, and coma. The author inclines to the theory of Marino-Zucco and Dutto, that Addison's disease is due to an auto-intoxication of the organism by neurin which the suprarenals have been unable to absorb. This theory is fascinating, especially for acute cases, but requires further confirmation.

CRANIECTOMY FOR MENTAL WEAKNESS.—RESULT FAVORABLE.—Spanbok, *Centralblt. f. Chirurgie*, Feb. 5th, 1895).

The patient, a lad *æt.* 14, was mentally very weak. Family history, neurotic. Could not stand or walk when three years old, and only began to talk in his fourth year. He suffered from enuresis nocturna up to the twelfth year. At school it was impossible to teach him to read and write. He was also very quarrelsome, violent, and malicious. An examination of the skull showed marked signs of degeneration—low forehead, large prominent ears, large spaces between the teeth; but, otherwise, he was physically well-developed. The patient never stood still for a moment; abused everybody whom he saw; did not answer correctly; had illusions of memory, and believed himself to be persecuted. Craniectomy was decided upon, and performed by making nine trephine openings in the skull (six on the right and three on the left side), and afterwards removing the bridges of bone between the openings on each side. On the right side the dura mater was divided as well, and the cerebral convolutions were noticed to be oedematous. There was a normal recovery, but for the first few months the patient's condition remained unaltered. But towards the end of the sixth month a permanent change for the better was noticed. The patient, who previously had been restless and unmanageable, became remarkably quiet and peaceable, was anxious to be helpful to his parents and sisters in every possible way, and expressed his delight at being cured of his troubles, and urged the parents of an epileptic idiot to have their child also operated upon.

THE INFLUENCE OF ERYSIPELAS ON THE COURSE AND TERMINATION OF ASIATIC CHOLERA.—
(*Medicinskeje Obozrenje*, No. 15, '94, and *Centralblt. f. Jnn. Medizin*, No. 6, '95).

The author treated 300 cases of cholera, with a mortality of 52 per cent. Amongst those who recovered were four cases who had an attack of erysipelas during the algide stage, i.e., on third and fourth day of their illness, and in each instance the supervention of the erysipelas had a most favourable influence on the course of the cholera. The low temperature yielded immediately to the high temperature of the erysipelas. Diarrhoea and cramps ceased almost at once, and within twenty-four hours the general condition of the patient was markedly improved. Apathy disappeared, the secretion of urine became re-established, and appetite and sleep returned. The course of the erysipelas was mild. The diagnosis of cholera in the above four cases was confirmed bacteriologically. The author concludes as follows:—"If we may assume that the centres of heat-production become paralysed under the influence of the cholera poison, we are also entitled to assume that the same centres regain their excitability under the influence of erysipelas poison."

Port Lincoln, March 23rd, 1895.

PROCEEDINGS OF BRANCHES.

SPECIAL NOTICE.

The Australasian Medical Gazette is supplied to all Members of the N. S. Wales, South Australian, and Victorian Branches Free of Cost. After the delivery of the March Issue, however, no member whose subscription to his branch for the current year remains unpaid shall be supplied with any further copies of the Gazette until the said subscription shall have been paid. The respective councils do not hold themselves responsible for the supply of back numbers which under this rule may have been undelivered.

Subscriptions should be forwarded to the respective branch treasurers as below—

New South Wales, Dr. Crago, 34 College Street, Sydney; South Australia, Dr. T. W. Corbin, King William-st., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING.

THE thirteenth annual meeting of the Branch was held at the Royal Society's room, Sydney, on Friday, 29th March, 1895, Dr. W. H. Crago, President, in the chair. There were 94 members present. Visitors: Dr. McBurney of Mackay, Dr. Hollis, M.P., of Goulburn, and Dr. McDonald, of Herbert River, Queensland.

THE HON. SECRETARY (Dr. Huxtable) read the circular convening the meeting. The President declared the meeting properly convened in accordance with the Articles of Association.

The minutes of the previous meeting were read and confirmed.

THE PRESIDENT stated that since the last meeting of the Branch the death of His Excellency Sir Robert Duff had occurred.

Dr. SYDNEY JONES proposed, and Dr. QUARF seconded, that a letter of condolence be forwarded to Lady Duff.

THE PRESIDENT announced the election of the following members:—Dr. G. L. Murray, Sydney; J. Flynn, Sydney; F. W. Langton, Redfern; E. A. Binney, Sydney; T. P. Anderson, Kiama; T. Tennant, Hillston; J. Kerr, Wollongong; D. Luker, Barraba; Hugh Kirkland, Bathurst; A. Pentland, West Maitland; R. W. Croke, Young; T. J. Henry, Warialda; C. E. Corlette, Sydney; Max Sully, Riverstone; S. Fielder, Gosford; L. J. Lamrock, Waverley; E. O. Newland, Coonamble; A. G. Cribb, Newcastle; J. B. McIlroy, Annandale; G. Watt, Hay; T. Lane, Inverell; Jos. Eaton, Rylstone; A. Carosso, Broken Hill; T. Heald, Berrigan; Hy. Walter, Pymble; W. D. Power, West Maitland; A. G. Cooley, North Sydney; G. B. Sweet, Napier, N.Z.; S. H. Hughes, Chatswood; L. Hickey, Nyngan; E. G. Blaxland, Burwood; T. E. O. Henry, Sydney; Jas. C. Cox, Sydney.

THE PRESIDENT appointed Drs. Shewen and Angel Money, scrutineers, and Drs. Todd, Collins, Lyden and Norrie to assist at the scrutiny of votes.

Dr. GRAHAM asked if it was a fact that if one of the gentlemen nominated for the editorship of the *Gazette* were elected editor of the *Gazette*, he intended to

immediately resign the position in favour of the other. If so, was it necessary to go on with the ballot?

Dr. G. O'NEILL asked if members, say at Broken Hill, had had sufficient notice of the meeting.

Dr. EVANS pointed out that the mere counting of the votes was not the taking of the ballot, but that the ballot had already been taken.

THE PRESIDENT ruled that the counting of the votes for the editorship should go on, and that the Articles of Association had been strictly complied with in the sending out of the ballot papers for officers.

Dr. CRAGO proposed the adoption of the report and balance-sheet, which were taken as read.

Dr. KNAGGS seconded the adoption of the report, which was carried.

It was unanimously agreed, on the suggestion of the President, to allow the new members, and those members who had only recently signed the agreement of incorporation, to exercise the privilege of voting.

The following is the Report of Council for the year 1894-5, made in accordance with Article of Association 49:—

REPORT OF COUNCIL.

In submitting the annual report for the year 1894-5, the Council congratulate members on the substantial progress which has been made by the Branch during the year. Two undertakings of great importance have been initiated and completed during this period, viz., the incorporation of the Branch under the Companies Act, and the purchase by the branch of the *Australasian Medical Gazette*.

Inasmuch as the details of these transactions are fresh in the minds of members, it is unnecessary to refer to the various steps taken to carry them out, and it will suffice to say that a large majority of members having declared in favour of the purchase of the *Gazette*, the incorporation of the branch became necessary in order to accomplish that object without the incurrence of an unlimited liability on individual members in connection therewith. The Council accordingly were, at a special general meeting held on the 7th December, instructed to take all necessary steps to carry out this object, and the incorporation was finally completed before the end of the year 1894, and in sufficient time to enable the Council to close with Mr. Bruck's offer for the sale of the *Gazette*, which held good up to the 31st December only.

The Council believe that the importance and benefit of the acquisition of the *Gazette* will be increasingly evident as time goes on. One object of paramount interest has already been brought about by it, viz., the practical federation of the Australasian Branches of the Association. And the Council would now take this opportunity of again acknowledging the generous and ready co-operation of the sister branches in sinking local interests, and offering to make the *Gazette* the journal of the whole of the Australasian Branches.

It is hoped that members who now enjoy the advantage of the possession by the branch of the *Australasian Medical Gazette*, comprising as it does the supply of this paper free of cost to each member, will not fail to note that this advantage has been made available to all by the generosity of those who have contributed to the *Gazette* fund, which was inaugurated by Dr. Faithfull, and liberally supported by many town and country members. The Council hope that many members who have not yet had an opportunity of contributing to this Fund, may in the near future find themselves in a position to do so.

The increase in the number of members during the year is unprecedented, and is undoubtedly largely due to the strong interest felt among the profession at

large in the projected purchase of the *Gazette*. No less than 122 new members have been elected, and applications for membership are still steadily coming in.

The council has to record with regret the deaths of six members during the year, viz., Drs. Craig Dixon, Douglas, J. Jarvie Hood, Walter Lyon, J. P. White, and James Struthers; and there have been ten resignations. The total number of members now on the roll is 297, so that the branch is now by far the largest of the colonial branches.

Notwithstanding the time consumed in transacting necessary business in connection with the purchase of the *Gazette* and the incorporation of the Branch, a large amount of useful work of a professional character was undertaken. Nine general and three special meetings were held, and twenty-two papers were read, a list of which will be found appended hereto. The attendances at the meetings were throughout the year exceptionally large, and averaged 45.

In the paper by Dr. Huxtable, read at the April meeting, on "The aims and policy of the New South Wales Branch of the British Medical Association," it was suggested by the author that some concession in the matter of the amount of subscriptions paid by the Australasian Branches to the parent association should be sought. By the motion of Dr. Sydney Jones it was unanimously resolved that the Branch be instructed to carry out the suggestions thus made; and though the more important of these suggestions, which included the purchase of the *Gazette*, were encompassed within the then current year, it has been found impossible thus far to comply with the instructions as it applied to the proposed concession in the reduction of annual subscriptions. The Council, however, hope that this important object will be kept in view during the coming year, and that by means of the federation of the Australasian Branches which has been brought about by the purchase of the *Gazette*, a united and successful effort may be made to accomplish this matter also.

The hon. treasurer's financial statement, duly audited, showing a credit balance at the end of 1894 of £65 8s. 8d., is appended.

The library, which still remains in the care of Messrs. Angus and Robertson, has been slowly growing, not only by the periodicals which the Branch subscribes to, but by the generosity of members. The following members have made donations of books to the library, viz.:—Dr. Knaggs, Dr. Crago, Dr. Davenport Parry and Dr. T. M. Kendall.

It is suggested that an hon. librarian should be appointed at an early date to have special charge of the collection, and it is hoped that ere long the library will be available for use by the whole of the members, both in town and country.

In response to the invitation of the Council, the past presidents have been good enough to present their portraits to the Branch, and the Council will have the pleasure of submitting their portraits for the inspection of members at the annual meeting. The following is the list of the past presidents of the Branch, with the date of their service. The first president was elected on March 1, 1880:—

1880.—The Hon. Sir Arthur Renwick, M.L.C.

1881.—Dr. A. Moffit.

1882.—Dr. G. Fortesque.

1883.—*Dr. F. Milford; †The Hon. Dr. C. K. Mackellar, M.L.C.

1884.—*Sir Alfred Roberts; †Dr. Quaife.

*Resigned.

†Elected for the unexpired portion of the year.

1885.—Dr. W. W. J. O'Reilly.

1886.—Dr. S. Knaggs.

1887.—The Hon. Dr. J. M. Creed, M.L.C.

1888.—Dr. T. Chambers.

1889.—Dr. Thomas Fiaschi.

1890.—Dr. G. T. Hankins.

1891.—Dr. Scot Skirving.

1892.—The Hon. Dr. J. Mildred Creed, M.L.C.

1893.—Dr. Ralph Worrall.

1894.—Dr. W. H. Crago.

Finally the Council desires, in closing this report, to indicate that they recognise the unprecedented success of the past year just recorded to be due to the more widespread interest taken in the Branch by the profession generally. They wish further to express the hope that individual members will not alone continue to give evidence of this healthful interest in the Branch, but will not overlook the importance of losing no opportunity of bringing the beneficent aims and work of the association under the notice of those professional confrères within this colony who may not as yet have joined the Branch.

W. H. CRAGO, President.

L. R. HUXTABLE, Hon. Secretary.

SUMMARY FOR THE YEAR 1894-5.

9 General Meetings.

3 Special Meetings (*re* purchase of *Gazette*).

22 Council Meetings.

122 New Members.

10 Resignations.

6 Deaths.

297 Members on the Roll.

22 Papers were read.

6 Exhibits, with Notes.

ATTENDANCE OF MEMBERS OF COUNCIL AT COUNCIL MEETINGS.

22 Council Meetings.

Dr. Crago (President) ...	...	...	...	22
" Jenkins (Vice-President) ...	...	...	...	17
" Clubbe (Hon. Treasurer) ...	...	...	...	19
" Huxtable (Hon. Secretary) ...	...	...	...	21
" Worrall ...	...	...	...	21
" Fiaschi ...	...	...	...	19
" Chisholm ...	...	...	...	18
" Thring ...	...	...	...	16
" Sydney Jones ...	...	...	...	11
" Knaggs (appointed 7th September, 1894) ...	...	...	...	7
" Angel Money (resigned 3rd August, 1894) ...	...	...	...	6

PAPERS READ.

1. The Aims and Policy of the N.S.W. Branch of the British Medical Association.—Dr. Huxtable.
2. Notes on a case of pseudo-hypertrophic paralysis.—Dr. Jamieson.
3. Abdominal Section.—Dr. McKay.
4. The treatment of gall stones.—Dr. Angel Money.
5. Notes on a case of Cholecystotomy.—Dr. Worrall.
6. Notes on a case of intestinal obstruction from gall stones.—Dr. Hankins.
7. Cases occurring in practice.—Dr. Van Someren.
8. Notes on the extirpation of the uterus.—Dr. Foreman.
9. Notes on a case of Amblyopia, due to di-nitro-benzol.—Dr. Pockley.
10. Notes on a case of Myxoedema in the male—treated by thyroid extract.—Dr. Huxtable.
11. Notes on a severe case of typhoid fever—its symptoms and treatment.—Dr. Thos. Dixon.
12. Some points in medical ethics.—Dr. Mullins.
13. Beri Beri in New South Wales.—Dr. Paton.
14. The notification of disease (infectious).—Dr. T. M. Kendall.
15. Two cases of Hysterectomy for fibro-myoma.—Dr. Thring.
16. Organo-Therapeutics—a synopsis.—Dr. Fieldstad.
17. Notes on a case of idiopathic muscular atrophy.—Dr. Scot Skirving.

18. Notes on a case of bi-lateral facial palsy as a sequence of Influenza.—Dr. Barkas.
19. Clinical Notes on four cases of Abdominal Section.—Dr. Oberhauser.
20. Notes on a case of operation for abscess of brain.—Dr. Clubbe.
21. Notes on a case of habitual abortion treated by Chlorate Potassium.—Dr. Barkas.
22. The Diagnosis of Diphtheria.—Dr. Clubbe.

EXHIBITS.

1. Specimen—pyo-salpinx.—Dr. Foreman.
2. A new pattern Clinical thermometer.—Dr. Sydney Jones for Dr. Robert Smith.
3. Patient suffering from Addison's Disease.—Dr. E. F. Ross.
4. Patient suffering from pseudo-hypertrophic paralysis.—Dr. Jarroldson.
5. Patient suffering from idiopathic muscular atrophy.—Dr. R. Scot Skirving.
6. Case of Abscess of the Brain—patient exhibited.—Dr. Clubbe.

THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

In Account with the Hon. Treasurer, 31st December, 1894.

Dr.		Cr.
	£ s. d.	£ s. d.
Balance on 31st December, 1893	331 5 2	Rent of Royal Society's Room ... 17 6 6
Subscriptions	510 18 0	Library Expenses ... 15 9 0
Donations towards <i>Gazette</i> Fund	342 8 6	Dr. C. J. Martin, for Experiments in Snakebite ... 17 6 0
Amount received from Home Association	4 12 6	Refreshments, General Meeting ... 15 0 0
Interest	24 10 8	Exchange on Country Cheques ... 1 11 0
		Stamps, Stationery, Printing, and Sundries ... 51 9 11
		Collecting Subscriptions ... 2 8 0
		Draft on London ... 222 14 0
		Salary—Assistant Secretary ... 60 0 0
		L. Bruck, <i>Gazettes</i> ... 3 15 0
		Cost of sending Draft ... 1 6 9
		Purchase of <i>Gazette</i> ... 750 0 0
		By Balance ... 65 8 8
	<u>£1,213 14 10</u>	<u>£1,213 14 10</u>

G. H. MACSWINNEY, }
A. JARVIE HOOD, } Auditors.
19th February, 1895.

CHARLES P. B. CLUBBE,
Hon. Treasurer.

Dr. SCOT SKIRVING said the Report was a most gratifying record of a year of work. Everyone seemed to have done everything that they should, but he wished the document had been somewhat fuller in its character. Before it was adopted he would like to ask a question or two which interested him and might also interest others. He asked them, in a spirit of justifiable inquiry. The questions were these. Was it a fact that one of the unwritten conditions of the sale of the *Gazette* by Mr. Bruck was the understanding that certain prominent members of the Branch should not hold the office of editor. He would further ask if the former editor of the journal, Dr. J. M. Creed, was one of these gentlemen. He (Dr. Scot Skirving) wished the members clearly to understand that he was not making an assertion and he certainly made no accusation. He simply asked the questions as they stood. To these questions he had a right, and all had a right, to expect a simple, direct answer from official sources—an answer which in its fulness and clearness would satisfy us all. If we could be assured, on the honour of those behind the scenes, that no such arrangement, no such conversation, no such unwritten agreement, ever took place, then he for one should be quite satisfied. If, on the other hand, such a conversation, such an unwritten agreement, any such understood arrangement did exist or occur, then he held that it was a distinct impropriety and injustice; for in that case, we who were the purchasers of the

Gazette were prohibited from electing whom we like of our number to the post of editor or editors, as he had understood was to obtain at the time of the negotiation. This trinity of editors, or merging of the positions into one, was, in his (Dr. Scot-Skirving's) opinion, so important a matter that it ought to have been settled at a general meeting of the Branch, with full notice—not at a quiet meeting of Council. Much complaint had been made of small irregularities in carrying out the rules, and general haste over the whole matter. For instance, it was certainly improper for one candidate to collect the ballot-papers of another, or his own. But it was an ungracious task to find fault with work done vigorously, if not wisely; so he would not detain them further than to advert to the fact that when he suggested last year that the trinity of editors would not work, he was assured that the editing was to be quite an impersonal matter—to be, in fact, in the hands of the Council. It was curious that, after two issues of the paper, it had been found that his (Dr. Scot-Skirving's) expectation was true, and, in a moment, in the twinkling of an eye, an election for one editor was sprung upon us. In the report before the meeting there ought to have been an explanation of these things.

The PRESIDENT (Dr. CRAIGO) said it had never been stipulated in writing by Mr. Bruck that certain gentlemen should be barred from the position of editor to *The Australasian Medical Gazette*, although he understood

that, in course of conversation, Mr. Bruck had mentioned one or two names as those that he could not well work with. He (Dr. Crago) regretted that Dr. Scot Skirving had thought it necessary to bring the matter up, as it could do no possible good. With reference to the ballot-papers for the editorship being sent to the hon. secretary, he (Dr. Crago) was to blame for that, if anyone was, as Dr. Huxtable suggested that they should be returned to the President; but as the rule as to the ballot-papers was clear, he (the President) thought it better to have them all sent to the hon. secretary in an envelope which was enclosed for the purpose, and they were handed unopened to him before the commencement of the meeting. The recommendation of the Council as to an editorial sub-committee was only of a tentative nature, and according to the new rules, the election devolved upon the members. The immediate cause of the recommendation that there should be one editor was a resolution passed at the last Council meeting, as it was then felt that a divided authority in the editorship was not the best for the *Gazette*, although no friction had taken place.

Dr. SYDNEY JONES said he rose, as a member of the Council, to give Dr. Skirving's suggestion, as to there having been any limitation as to editorship imposed by Mr. Bruck as a condition of purchase, an emphatic denial as far as his knowledge of the transactions went. With respect to Dr. Skirving's allegation of impropriety, in the ballot-papers having been returned to Dr. Huxtable, as hon. secretary, he would point out that there was a distinct rule upon the matter in the Articles of Association, directing the return of the papers to the hon. secretary, and that such rule had been complied with. He, therefore, could not conceive how any question as to this matter could reasonably be raised.

Dr. WORRALL said, as a member of the Council, he desired to endorse the President's denial of Dr. Skirving's charges.

(Dr. SKIRVING here said he had made no charges.)

Dr. WORRALL said if Dr. Skirving had not made charges, he had certainly suggested them, and his insinuation in reference to the ballot-papers being sent to the hon. secretary—the usual course—was unworthy of him. He (Dr. Worrall) had never heard of any compact with Mr. Bruck for the exclusion of certain gentlemen from the control of the *Gazette*. When the question of purchasing the *Gazette* was being discussed it was clearly laid down that the sub-committee of three to act as editors was a temporary expedient, and that in the future one editor should be appointed. By the unanimous vote of that meeting the Council was empowered to take whatever steps it thought fit to take over and carry on the *Gazette*. It was therefore acting within its authority in deciding that from henceforth one individual should have the sole authority.

Dr. HUXTABLE reported that the following subscriptions had been received towards the *Gazette* Fund:—Dr. Hankins, £2 2s.; Dr. Colpe, £2 2s.; and Dr. Smyth, of Campbelltown, £2 2s., together with a number of smaller sums handed over by Mr. Bruck as the balance of subscriptions to *Gazette* Fund before close of last year, and donated by members to the fund, which now reaches the total of £428 odd.

The PRESIDENT (Dr. W. H. Crago) read his retiring address.

PRESIDENTIAL ADDRESS.

DELIVERED AT THE ANNUAL MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION. BY W. H. CRAGO, L.R.C.P. LOND., M.R.C.S. ENG.

GENTLEMEN,—In accordance with the custom of the Branch, it is my privilege, as your retiring President, to inflict you with a presidential address. It shall be my endeavour not to weary you.

The year that has just passed has been the most memorable one in the history of the Branch, and marks a striking epoch in its career and usefulness. Not only has the number of new members elected exceeded that of any previous year (not excepting the first), not only have the attendances at our meetings, and the receipts been record ones, but the Branch has been incorporated under the license of the Governor, with the advice of the Executive Council, and registered under the Companies Act, and the bold step has been taken of acquiring *The Australasian Medical Gazette* as the property of the Branch.

Most, if not all, of these results have been attained through the enormous amount of energy and zeal our hon. secretary (Dr. Huxtable) has thrown into his work during the year.

In the report of the Council, the particulars of the meetings held, papers read, new members elected, and other details of the year's work are given, so I will not weary you with recapitulating them. In the Treasurer's statement particulars of the finances are given.

Since our last annual meeting death has removed from our list of members Drs. Craig Dixon, A. W. Douglas, J. Jarvie Hood, W. Lyon, J. P. White, and J. Struthers. Although these members did not take a very active part in our meetings, from the reason that most of them lived in the country; still their removal in the prime of manhood cannot fail to remind us of the uncertainty of human life.

Two of our members—Drs. W. Odillo Maher and C. J. Weekes, strangely enough both ophthalmic surgeons—were injured in that disastrous railway accident which proved fatal to so many of our most active citizens. Fortunately, these gentlemen escaped with their lives, although Dr. Maher went through a very protracted time of suffering. On behalf of the Branch, I tender both these gentlemen our warmest felicitations on their recovery.

The one absorbing topic during the year has been the advisability, or otherwise, of purchasing *The Australasian Medical Gazette*. This was brought prominently before the members at the first ordinary meeting in April, by Dr. Huxtable, in a paper on "The Aims and Policy of the New South Wales Branch of the B.M.A." As the result of that paper and the discussion that followed on it, the Council was directed to take into consideration the advisability and possibility of carrying it out. After very carefully going into the matter, the Council made a recommendation, in a report to the members, which was considered at a special meeting called for that purpose, that the Branch purchase Mr. Bruck's interest in the *Gazette*, and that it was well within its power to do so; although it might be necessary that members should continue to pay for the *Gazette* as hitherto, for a year at least. The result of the discussion at that special, and at an adjourned meeting, was, that the Council was empowered, by a large majority, to negotiate for the purchase of the *A.M.G.*

When the negotiations for the purchase of the paper and the carrying of it on by the Branch were entered into, it was found that to do so with the Branch

not incorporated, and consequently with the liability of its members unlimited, would mean that anyone who felt aggrieved at any article or statement in the paper could bring a libel action against any individual member he thought best worth "going for." This would have involved the resignation of many members, who rightly objected to their being placed in that undesirable position, of being liable to be sued for damages in a matter with which they may have had nothing to do. In order to relieve the members of this risk, it was found necessary to incorporate the Branch, and to register it under the Companies Act, which has been successfully carried out, and the personal liability of every individual member limited to one guinea, which is similar to the parent association. This step has been taken solely for the protection of our members, and it appears to me that without such protection we could never think of possessing a local journal of our own. It is not intended in any way to disturb our relations with the parent association. The incorporation and registration necessitated a considerable elaboration of our rules, for as an incorporated body we are bound to keep within the four corners of our charter. Needless to say that the new rules necessary have been adopted as far as possible from the rules of the parent association, and are open to alteration as may be found necessary, while the memorandum of association does not admit of alteration. The legal part of the work has been satisfactorily performed by Mr. Elliott Meyer, Market-street.

Although a large majority of the members has supported the Council in the course it has taken, it could not be expected that the step would meet with unanimous approval, and so several members have strongly and conscientiously opposed the scheme. However, now that the purchase of the *A.M.G.* is an accomplished fact, and its success depends to a large extent on the goodwill of every member of the Branch, I feel sure that we may rely on the generous support of those who opposed us, especially as very few were altogether opposed to the Branch possessing a journal of its own, but thought it could successfully start one on its own account. In support of my hope, we have good assurance in the fact that some who vigorously opposed the scheme afterwards subscribed liberally to the *Gazette* fund.

The ability of the Branch to successfully start a new paper is a matter of opinion, but those of us who gave the matter a great deal of thought, and carefully weighed the pros. and cons., felt convinced that to acquire the paper that had been so long and so successfully carried on by Mr. Bruck—who deserves well of the whole of the profession in Australia for his enterprise—was the wiser course. What has been the result? We have already practically achieved the federation of the whole of the Branches of the B.M.A. in Australia, as the Victorian, the South Australian, and the Queensland branches have made the *A.M.G.* their official organ, with an editor in each colony. This could not have been the case had we started a new paper in opposition to the *A.M.G.* The manner in which the members of the Victorian Branch have met us, and waived their right, as the oldest branch, to have the journal published in Melbourne, is deserving of our warmest commendation. With such a truly federal spirit, it should not be long before there is a true federation of all the branches of the B.M.A. in these colonies into an Australasian Branch, such as is sought by a resolution of the South Australian Branch, passed last November. I feel convinced that a powerful Australasian Branch of the B.M.A. is more within our reach than a purely Australasian Medical Association

would be, to say nothing of the advantages of belonging to an association almost world-wide in its magnitude, and containing something like 16,000 members. Surely, its constitution is broad enough and liberal enough to embrace within its membership men of every school; and although those in authority are sometimes accused of holding narrow views, still it must be remembered that no councillor holds office for more than a year without re-election, and as every member has an equal voice in the election of the Council, it (the Council) should be thoroughly representative of the whole body of members.

Towards hastening on this desideratum, a powerful journal can do much, and such will be one of the chief aims of the *A.M.G.* Just think what weight a united profession would have in urging on any necessary medical reforms. If in matters of broad general interest, affecting the health and well-being of the people throughout the Continent, we could so far lay aside our little local jealousies, and speak with a united voice, it would be a voice that no Government would lightly ignore.

To come to our own local interests, it is for the sake of our country members that I am chiefly pleased that we possess a journal which we can supply to them—as well as to all our members—for the usual subscription; for hitherto the inducement has been small indeed for country practitioners to join our Branch, as it amounted to paying £2 2s. per annum for the *B.M.J.*, which, by their belonging to the parent Association, they could obtain for £1 1s. Now, however, things are very different, as they receive in return for their two guinea subscription, the *B.M.J.* and the *A.M.G.*, so that they receive fair value for their money, to say nothing of the advantages of belonging to an association which is becoming a power in the Colony, and is able and willing to assist its members in many ways, such as in settling unhappy disputes, and in helping to remove abuses of all kinds. The inducement of belonging to the Branch is now so great that we may reasonably expect every member of the profession in the Colony to join.

For the present year Mr. Bruck will continue to carry on the *Gazette* as hitherto—only in the name of the Branch—and for this privilege he supplies 280 of our members with the *Gazette* free, the Council—through its editorial sub-committee (Drs. Fiaschi, Huxtable, and Knaggs), and after to-night through the editor elected by this meeting—being responsible for the editorials and other literary matter. I feel it my duty here to acknowledge our indebtedness to Dr. Faithfull for the practical hint he gave us in suggesting the *Gazette* Fund, and which was at once acted upon by Dr. Knaggs and others. But for this Fund we should have had to commence with a bank overdraft, and should not have been able to give the *Gazette* free to our members from the start.

The Council has had a busy time during the year, and probably more Council meetings have been held than during any previous year. In addition to the affairs of the Association, several matters of ethics have been referred to it, and if the Council has not succeeded in giving satisfaction to all parties, I can vouch for the fact that the members of the Council have honestly used their best endeavours to try and arrive at unbiased and impartial decisions.

I may be pardoned for here giving what some may think impertinent advice. It is this: if medical men generally would refer their disputes and misunderstandings to the Council of the Association, instead of parading them in the country press, or bringing them before hospital committees, it would be better for them—

selves and better for the general reputation of the profession. Practitioners referring matters of this kind to the Council can rely on them receiving careful consideration and investigation. It will probably be found desirable to appoint a sub-committee of the Council to deal with questions of this kind, as a small committee of three or four is more competent to investigate disputes than a larger body like the whole Council. Many of the unhappy relations that exist between men in country towns (and in Sydney too) would be avoided if there was a feeling of greater confidence in our brother practitioners. This implies, of course, that each member should act up to the highest traditions of the profession, and that such a thing as a dishonourable act towards a brother practitioner should be spurned as unbecoming in a member of an honourable profession. In many cases the bitterest feelings are engendered from slight misunderstandings, which are treasured up and magnified; whereas if an opportunity were given for explanation, it might be found that nothing unkind or ungentlemanly had been done or intended. In many cases, I am sure, we are all too much inclined to pay attention to the statements of our patients, as to the sayings and doings of our confrères, although we all profess not to do so, and thus we are sometimes led to think that they are little better than ignorant quacks, whereas if we meet them in friendly intercourse, we find that after all they are not such "ignoramus" as we had thought them to be. Let us cultivate, as far as possible, a friendly, courteous feeling toward our rivals, and if they chance to be called in to one of our cases, don't let us think that it is due to any underhand work on their part. We must remember that we have no vested interest in our patients, and they have a perfect right to change their medical adviser, just as much as we have to change our tailor, and the more we recognise this the better it will be for the reputation of the profession.

In Styrup's "Code of Medical Ethics" is printed a modified version of the Presidential Address delivered before the late Shropshire Ethical Branch of the British Medical Association in 1861, from which I venture to copy the following extracts:—"We call ourselves professional brethren! May we, henceforth in the daily intercourse of life, earnestly strive to realise the thought by each offering to the other a high-minded and fraternal regard, for there cannot be a doubt but that many of the wrongs from which we are suffering arise out of our defective conduct to each other; and it is an equally evident truth that by avoiding invidious remarks, and every unworthy artifice to elevate SELF at the expense of our NEIGHBOURS, we should achieve the greatest good that could possibly be conferred on our profession. In fine, if the great moral precept, written by God's own finger on every man's heart—"Whatsoever ye would that men should do unto you, even so do unto them"—formed our simple rule of action, we might, as regards our social polity at least, safely trust to the impulses of a generous *esprit de corps*, and at the same time confidently expect to realize the hitherto elusive hope of fulfilling our arduous duties without the occurrence of those unhappy bickerings and differences which have placed our proverbially divided profession in so unenviable a light before the public. Let us, therefore, act towards one another as Christian gentlemen, remembering that it is our province to heal, not to inflict injuries; and, while mindful of our own good name, let us on all occasions conscientiously uphold the reputation of our friends and competitors; for unless (we repeat) we are true to ourselves, unless we treat the faults of a brother with generosity, and are careful of his character as well as

of our own, we are unworthy disciples of an honourable profession—a profession in which charity, in its widest meaning, should form our rule of action and our rule of conduct—a profession which, from its very nature, should teach us daily to practise brotherly love, to contend with no jealous spirit indoors, nor animosity without; to avoid detraction and calumny, to use no ill-natured remarks respecting our brethren; but ever to bear in mind that portion of the Christian's duty which teaches us to bury in oblivion a brother's failings, and to raise his virtues from the tomb; in short, to say nothing rather than defame, always having in remembrance that 'to err is human—to forgive divine.'

The past year has been a very disastrous one to many of us financially, as I think, with few exceptions, there has been a very considerable falling-off in our professional incomes. Doubtless, the financial depression through which the colonies are passing has much to do with this, as is shown by the overcrowded state of the hospitals, especially the outdoor departments; for hundreds of families have been compelled to seek attendance, advice, and medicines from the hospitals, who in ordinary times would seek the advice and attendance of private practitioners. Probably, as far as some of us general practitioners are concerned, the growth of "specialism" has something to do with our diminished incomes. It seems that the time is fast approaching when every organ, and every few square inches of the body's surface, will have its "specialist"; and, to some extent, the advance of knowledge, and the enormous growth of "the making of many books," necessitates this, for it is almost impossible for any man to keep abreast of the whole of medical literature.

Another cause of diminished incomes is the relatively larger number of medical practitioners to the population than existed a few years ago. I find that the number of names on the Medical Register of New South Wales on December 31st, 1894, was 1,143, and the estimated population of the colony on the same date was 1,251,450, or one medical practitioner to every 1,095 of the population; or, supposing the actual number practising in the colony to be 800, that would give one medical practitioner to every 1,564 of the population, as against one to every 1,708 at the end of 1892, as given in Mr. Bruck's paper on "The State of the Medical Profession in Australia, &c.," published in *The Australasian Medical Gazette* of March, 1893. A similar increase in the ratio has taken place in England, where, as shown by Dr. Boxall in his opening address at the Middlesex Hospital Medical School last October, there was, in 1893, one medical practitioner to every 1,451 of the population, while in 1882 there was only one practitioner to every 1,703 of the population.

I adopt three recommendations made in another of the opening addresses at the London Medical Schools, viz., from that delivered by Dr. Scanes Spicer, at St. Mary's:—"1. Join the British Medical Association. 2. Join a Medical Defence Union. 3. Insure against accident, and assure your lives." The whole address will repay perusal. (See *British Medical Journal*, October 6th, 1894, page 753.)

During the past year an epidemic of whooping cough has prevailed, and influenza again made its appearance, but not to anything like the same extent as the great epidemic of 1891—not in Sydney, at all events—although in the country towns and districts it was particularly severe on old people. The severe epidemic of bubonic plague which occurred at Hong-kong was not without its interest to us, both from its comparative nearness to some parts of Australia, and from the fact that we have so large a number of Chinese living in Sydney, many of them living in the

most utter disregard of all sanitary laws and requirement. A paper on this epidemic, written by Dr. Molyneux, was on our business-paper for two or three months, but was always crowded out; it will, however, appear in the *Australasian Medical Gazette*.

What promises to be one of the most important and practical discoveries of the century has been brought under the notice of the profession during the past year. I refer to the Diphtheria Antitoxin in the treatment of diphtheria. It is too early yet to speak definitely of its curative effect, a much longer continued trial in different parts being necessary to determine its real value; still there is already sufficient evidence to show that it possesses a very marked influence for good when administered in the earliest stages of diphtheria. It appeared to me that in many of the earliest cases reported there was not sufficient care taken to exclude non-diphtheritic cases, such as ordinary follicular tonsillitis, and we all know that classing all these as diphtheria, we may obtain very favourable results with almost any form of treatment we may adopt. But, taking some of the later statistics, where only those cases which have been subjected to a bacteriological test have been included, the mortality has been reduced 50 per cent. This would mean an enormous saving of life should its further extended use maintain that percentage. It is estimated that no less than two millions of people (mostly children) have died from diphtheria during the last ten years—that is, throughout the civilised world. I find from the Government Statistician's report that during the seven years, 1888-1894, 1,036 deaths from diphtheria were registered in Sydney and suburbs alone; so, if half of those could have been saved, it would have amounted to over 500. In America the mortality from diphtheria amounts to something like 30,000 annually. The steps taken by our own Government—acting under the advice of Professor Anderson Stuart—to provide a supply of the serum here, and the appointment of Dr. Tidswell to superintend the same, will shortly put us in possession of the remedy, when we trust that the highest expectations of its efficiency will be fully realised. My own experience is limited to two cases—two brothers of a little girl who died in the Children's Hospital from a very malignant attack of diphtheria. In one case each tonsil was covered with a greyish membrane, and the child's temperature was 101 deg. F., with some laryngeal hoarseness, and in the other case there was only an enlargement of the tonsils, with an intense redness of the fauces, and a temperature of 99 deg. F. I injected 15 minims of Aronson's anti-toxin into the buttock of each, and the result was certainly very satisfactory, as on the following day there was no spread of the membrane in the one case, and the temperature had fallen to 99 deg., while in the other the redness and swelling of the fauces had disappeared, and the temperature was sub-normal. I repeated the injection in the case that had the membrane, and by the day following that, the membrane had to a great extent peeled off. The only value of these two cases is that they tend to confirm the observations of others, viz., that it is in the earliest stages that you may expect the greatest benefit; in fact, it is doubtful whether it does not rather increase the cardiac asthenia in the later stages.

Speaking of diphtheria naturally leads one to think of the great mortality of children under five years of age. In the *British Medical Journal* for October 13th, 1894, page 821, will be found an article headed "Youngest England," by Mr. D. Biddle, M.R.C.S., Eng., in which some striking figures are given respecting the mortality of children in England, and the

diminished ratio of children under five to the whole population. It will there be found stated that "for many years past, except when some epidemic (like influenza) whose nature it is to attack older people most has been present, death has removed from this group (0 to 5) two for every three removed from all the other age groups put together," or, in other words, 40 per cent. of the total number of deaths in England take place among children under five years of age. The report of our Government Statistician (Mr. Coghlan) shows that in December last, out of a total of 562 deaths registered in Sydney and suburbs, 302, or 53.74 per cent., were of children under five years of age, and 241 of these were under the age of one year. In January of this year, the number of deaths registered numbered 538, and of these 266, or 49.44 per cent., were under five years, and 201, or 37.36 per cent., were under one year. It may not be fair to select two summer months in a matter of this kind, but to take two whole years (1891 and 1892) the figures are, for the whole of New South Wales:—

Deaths at all ages.	Under 5 years.	Under 1 year.
1891 ... 16,286	6,510	4,691
1892 ... 14,410	5,827	4,245

Thus it may be said that in round numbers about forty per cent. of the total deaths in New South Wales occur amongst children under five years of age, and nearly thirty per cent. under one year of age. Is it too much to say that one-half of all children that die during the first year of life are sacrificed to errors in feeding? This is a matter that cannot be decided by the statistician, as so many of these cases are certified as having died from atrophy, marasmus, enteritis, diarrhoea, &c., that until some more uniform plan of certification is adopted, it will be impossible to arrive at correct statistics on the subject. Possibly, in very many cases the death of the infant is desired, as most of the illegitimate children are taken from the breast soon after they are born, and I think it will be found that a very large number of the infants that die are bottled. Looked at from an economic point of view, this terrible mortality amongst infants represents great loss to the country, as, notwithstanding the number of unemployed in Sydney, it cannot with truth be said that the colony is anything like fully populated; and as the country cannot be properly opened up without a settled population, so the unnecessary loss of so many children every year means a public loss. This great infantile mortality, taken with the almost universal desire that exists to limit the natural increase of the population, is assuming a somewhat serious aspect, and cannot fail to bring about an arrest of the normal development of the community, if it does not cause a deterioration of the stamina of the human race. Malthusian doctrines are so universally acted upon at present, and the aversion to large families is so strong, that in some countries, as France, the population is positively decreasing, while in England the proportion of children to the whole population is considerably less than it was in 1881. The resort to practices of all kinds that are rife for the prevention of large families is not without its ill effect on those who practise them; hence, to some extent, the large number of nervous and uterine troubles that come under our care. I know that I am laying myself open to the charge of finding fault without suggesting a remedy; but my desire has been to call attention to what I consider to be an excessive infantile mortality, in the hope that some of our members may be led to go into the matter, and to suggest some improvement in the feeding of infants that could be widely disseminated. After penning the foregoing thoughts about the limitation of families, &c.,

I found that Dr. Balls-Headley had dealt more fully and interestingly with the subject in his work on the "Evolution of the Diseases of Women," in which numerous interesting tabulated statistics will be found.

A matter of interest to the whole city, and of especial interest to the medical profession, has occurred during the past year, in the opening of the new buildings for the Sydney Hospital. For many years the structure used for the purpose of the Sydney Hospital was a disgrace to the city, while the walls of the new structure were allowed to stand in an unfinished state, owing to political quibblings. The structure is now a credit to the city, and the site is unsurpassed anywhere. Without for one moment wishing to detract from the reputation and usefulness of the Prince Alfred Hospital, I think there are few members of our profession who would venture the opinion that there was no need for the Sydney Hospital.

There is still one need we have in Sydney in the way of hospitals. I allude to the want of a Hospital for Incurables in or near to Sydney. With the exception of the Hospice for the Dying, in Victoria-street, near St. Vincent's Hospital, there is no place specially set apart for soothing the last moments of those approaching their end. Some months ago the matter was brought under the notice of the public in the correspondence columns of the *Sydney Morning Herald*, but there it remains for the present. Newington, to some extent, meets the need, but not fully; and there they are very much overcrowded, like most of the other Government asylums. Here, then, is a means for some of our wealthy philanthropists to distinguish themselves, and earn the "death-bed blessings" of poor suffering humanity.

A presidential address would not be complete without reference to a proposed Medical Bill. We have been vainly hoping for many years that the day would at last come when New South Wales possessed a Medical Bill on its Statute Book. Alas! that time has not yet arrived. Soon after the present Government came into office, the Premier intimated his willingness to include a short Medical Bill in the Government programme, and announced the same in the Governor's speech. This Bill, which has since passed the Legislative Council, consists of only one clause, which makes it a penal offence for anyone to assume medical or surgical qualifications which he does not possess, and it also goes further in preventing a quack business from being carried on by anyone other than the person whose name appears on the house. Although it is not all that we might have wished for, still it is a step in the right direction, and by enabling the public to distinguish the qualified from the unqualified practitioner, a substantial advance will be gained. I have the assurance of the Honorable the Premier that he will use his every effort to pass the Bill into law during the present session, and in keeping with that promise he has carried the second reading in the Legislative Assembly. While human nature is what it is, suffering humanity will continue to clutch at straws, and will continue to be gulled by the plausible rigmoroles of heaven-born healers, such as those who profess to diagnose your case from a lock of your hair, or some of the dust from the room in which you have been sleeping; but let those who consult them do so with their eyes open.

Another measure that we may reasonably hope for in the near future is an amendment of the law relating to the registration of medical men, so as to give the Medical Board power to erase the name of anyone who, from any cause, has forfeited the qualifications on which he had been registered, from the register. At

present several names appear as possessing, say the M.R.C.S., who have been struck off the list of members of their college, and it seems anomalous that the Government should continue to invest a man with a qualification which has been withdrawn by the body granting it.

The results of certain legal proceedings, which have been instituted against medical men in different parts of the world lately, tend to add greatly to the responsibilities of our calling, and should make a man consider well before entering upon the costly education necessary to qualify for practice as physician or surgeon; as he never knows the day when his fortune and his reputation may be shattered in some action for alleged unskilful practice, and in some cases—to the eternal disgrace of the profession be it said—brought about through the assistance of some rival, who will lend himself to such a dastardly proceeding in order to injure a "brother" practitioner. It will probably fall within the province of this Branch to consider what steps shall be taken to protect, as far as possible, members of the profession in the pursuit of their calling. The first thought that occurs to one is that no surgical case should be undertaken without consultation with another practitioner approved of by the patient or his friends. Another is a plan that I am informed is almost universally adopted in America, viz., for the patient or his friends to sign a document indemnifying the surgeon from any ill results that may follow his treatment. This, of course, would not protect one from the consequences of culpable ignorance or negligence, but should shield him where reasonable skill and attention have been shown. Such a document would have to be carefully worded, so as to be perfectly fair to the two parties concerned.

My predecessor in this chair (Dr. Worrall), in his retiring address, expressed the hope that by some means we might become the possessors of a Medical Institute, in which we could hold our meetings, locate our library, &c. I venture to renew the hope, as it would add greatly to the value of the Branch to country members had we a place where they could meet some of their fellow-members when in Sydney, and where they could have their letters addressed. Looking forward to that time, steps have been taken to induce the past Presidents of the Branch to present enlarged portraits of themselves to the Branch with which to adorn the walls of our future house. I am pleased to say that most of them have fallen in with the suggestion, evidence of which we have before us this evening.

Dr. Chambers, in his retiring address, regretted the fact that a "Benevolent Fund" had not been started during his term of office; I have also to express my regret that no such fund yet exists. Although no special appeal has been made to members of the profession lately on behalf of the widows or orphans of members of our profession, still several cases have come before some of us where such a fund could have been wisely used in helping some members of the profession, who were in great distress. A small subscription of, say, 10s. a year for a few years from all members of the profession in New South Wales would build up such a fund, which, if properly managed and invested, would bring in sufficient interest to meet all ordinary demands upon it.

Our thanks are due to our assistant secretary, Mr. Green, for the efficient way in which he has discharged his onerous duties during the year.

In conclusion, I have to express my warmest thanks to the members of the Branch for having conferred upon me such a distinguished honour, in electing me as their President for the year, which ends with this my last official duty.

No one is so fully conscious of my shortcomings as myself, and I thank you most cordially for all your kindness and consideration to me during my term of office. If I have failed in the performance of my duties, it has not been from the want of a desire to do my duty well, but from a want of ability to perform it better. I am sure you will all join with me in the hope that this Branch may continue to prosper, and that it may be worthy of the great Society of which it is a Branch, and worthy of this the senior colony of Australasia.

Dr. FIASCHI proposed a vote of thanks to Dr. Crago for his address, and said he rose to propose a vote of thanks to Dr. Crago, both for his address and for the manner in which, during the past year, he had fulfilled his duties as President. Dr. Crago was a modest man, and in his concluding remarks expressed his fear that his ability had not been equal to his goodwill. Those who had been around him during this year's work knew well that such was not the case, for, together with zeal, he had displayed tact and ability of the first order. As regards his address, he warned members that he was going to give us a sermon. We are men so absorbed in practical work that we are apt to lose sight of the high ideals that are the aims of the profession. It is a good thing, then, that occasionally these ideals were brought back to our mind by a sermon, and fortunate have we been to-night in being re-called to them by such an earnest voice as Dr. Crago's. Of the many points of his address that were highly important to us, and to the public, two had particularly impressed him. First, his appeal to us for brotherly union. As if to accentuate the necessity of it, he alluded to the increase in the proportion of medical men to the population of this colony. This fact, which was a general one throughout the world, he did not deplore; on the contrary, he thought it one of which the profession ought to be proud. It showed that, in securing to humanity an increase of its total happiness, by the preservation and restoration of health, our efforts were appreciated. Furthermore, thanks to the many high minds that had arisen amongst its followers, medicine is yearly conquering new fields of work. If the horizon of medical usefulness was extending daily, it was natural that more workers were required to bring the fruits of it to the people. How necessary, then, that amongst this privileged band, the most perfect feeling of fellowship should prevail! Secondly, Dr. Crago's statement that Sydney had no proper institution fit to fulfil the object of a Home for the dying, was one that the memory of many a pitiful case proved to him as absolutely true. When we remember that men are something higher than mere animals, and that in the midst of all our efforts to live, the silent thought was ever impending of our last departure, we realise the importance of securing to the homeless amongst our fellow-citizens a place where they might find kindness and peace in their supreme moments. I trust that we shall not allow this great and good suggestion of Dr. Crago to fall unheeded, but that we shall all use our influence so that the charity may before long become a practical fact.

Dr. KNAGGS seconded the vote of thanks to Dr. Crago, which was carried by acclamation.

Dr. CRAGO thanked the members for the hearty expression of good feeling, and then declared the result of the voting for officers, as follows:—Election of officers: President, Dr. E. J. Jenkins, elected unopposed; Vice-President, Dr. Sydney Jones, elected unopposed.

The following gentlemen were nominated as councillors, the first twelve being elected the Council for the ensuing year:—Drs. Huxtable, Fiaschi, Clubbe,

W. Chisholm, Knaggs, Crago, Worrall, Scot Skirving, Thring, Faithfull, Coutie, F. H. Quaife, MacSwinney, Newmarch, Odillo Maher and A. Jarvie Hood.

Dr. Crago then vacated the chair, and Dr. E. J. Jenkins thanked the members for having done him the honor of electing him President of the Branch, and took the chair for the remainder of the meeting.

THE EDITORSHIP OF THE "GAZETTE."

Dr. HUXTABLE said,—Mr. President, with your permission, Sir, I shall beg members to permit me to avail myself of an opportunity such as will certainly never again be open to me to address to them a few words upon the important matter which has been determined by them this evening, viz., the matter of the future editing of the *Gazette*. Now, Sir, although I make this request to be heard with the greatest possible respect, I feel that I make it also with a certain amount of right to be heard by members upon this particular part of the business of the Branch. For it is to this special interest of the Branch that I have, in my post of secretary, and surrounded and assisted and encouraged by the most loyal set of colleagues that any man ever had to work with, devoted the whole of the energy and activity demanded of me by that post during the past twelve months, and that demand has been no light one. From the accident of my having held the position of secretary during the past eventful twelve months, I have necessarily been in possession of fuller information respecting all the transactions which led up to the purchase of the paper, especially in its relation to the sister branches in the other colonies, than has been within reach of any other member, except, perhaps, our President himself, and it is mainly upon this ground that I feel myself justified in begging a hearing of members this evening. The result of that twelve months of experience, then, has been that I have arrived at certain conclusions as to the future of the *Gazette*, which I am sure are of importance, and which, I think, may be of interest. First among these, Sir, is the opinion—which, I believe, need only to be stated to members in order to be endorsed by them—that by far the most important duty of the editor appointed by this branch during the next twelve months will be the maintenance of satisfactory relations with the sister branches, and with the editors who, under our agreement with them, have been by them appointed. A failure in this respect would undoubtedly imperil the whole future of the *Gazette*, and, in order to the maintenance of such satisfactory relations, it seems to me that a full knowledge—the fullest possible knowledge—of the negotiations which have been taking place with the other branches in respect to the establishment of the *Gazette* as the journal of the federated branches, is essential. Far more important than the possession of mere literary ability—the demand for which, in the present state of our development, at least, is not great—is the possession of such knowledge, and, with it, a knowledge of the men with whom we have to deal in the other colonies. In addition to this, the perception of certain difficulties and dangers which lie before us in the near future, is, no doubt, of great importance. One of these difficulties is the necessity, which will very shortly have to be met, of providing some efficient means of conducting the general business of the paper when the present arrangement with the late proprietor has come to an end. These are matters the onus of which must lie upon the editor, and upon him almost entirely. For, as a matter of fact, the branch will look to him to make the *Gazette* a financial, as well as a literary, success. There are other points in

this connection which might be mentioned, but I have said enough to illustrate my opinion that there are other qualifications than mere literary ones necessary in the editor. And, Sir, I have mentioned this in order to add that it was upon such considerations alone that I permitted myself with considerable reluctance to be nominated for the editorial post. Such also were, I believe, the main grounds upon which I was requested to accept such nomination at the hands of those gentlemen who made it. Now, from the outset of the negotiations for the purchase of the *Gazette* by this branch, it was clear that our main difficulty would be found to lie in satisfactorily filling the position of editor—of filling it, that is, in a manner which would be at once pleasing and acceptable to the members generally, or at any rate to a large majority of them, for unanimity upon such a point was of course hardly to be considered as attainable, and at the same time would ensure the paper being made a success. And the result of this evening's ballot has amply justified the opinion which existed as to that difficulty. That result has proved that even with such heavy voting as we have had to-night—a voting which proves the universality of the interest taken by members in this matter, a sweeping majority for either candidate, was out of the question. Under these circumstances, with so even a division of opinion among members, the Council may well feel itself in a dilemma, for it is quite clear that, in order to carry on the *Gazette* with even a fair show of success, the man who occupies the editorial chair should have not a mere majority of votes, but should possess also the support and sympathy practically of the whole branch. That is a result which we have, unhappily, not arrived at by this evening's ballot; and I will be so bold as to say that there is not a member of the branch—no, nor of the Council itself—who appreciates that position more keenly than I do at the present moment. Now, I have no doubt that some, at least, of those gentlemen who have been so kind as to vote for my election to the post may at this moment be inclined to regard the result of that ballot as being in some sort a victory for me. I desire to say, and to say with all the emphasis of which I am capable, that I regard the matter in no such light. On the contrary, I should regard the result of the ballot, if that result were to be held as finally disposing of and settling the matter, as a result which would impose upon me a burthen, an extremely irksome burthen, which would undoubtedly, were I under the circumstances to undertake it, prove too heavy for me to carry to a successful issue—successful, that is to say, in as far as the best interests of the branch are concerned. Every member who has given this question of editing the *Gazette* any thought must have arrived at the conclusion that the difficulties of editing it successfully—great under any circumstances—would be made insuperable were the editor to hold office on the will of a mere majority, with the hostility, or even with the grudging support of a strong minority. That, at any rate, is the conclusion which has forced itself upon me after careful consideration of the whole matter; and, moreover, the events of the past week have abundantly made it evident to me, were I, under such circumstances as have arisen this evening, to attempt the task, I should not be acting in the best interests of the Branch. That being so, it was a satisfaction to me to find that other members, whose opinions I hold in great respect, were taking a similar view of the case, and within the past twenty-four hours or so this view has found expression in a suggestion that a joint editorship of Dr. Knaggs and myself might be arranged. It is not necessary for

me to say here publicly to Dr. Knaggs, what he is perfectly well aware of, that such an arrangement would, as far as my own personal feelings are concerned, be absolutely agreeable to me. But this is a matter which, I take it, should not be settled by mere personal feelings. I have all along believed, and I still strongly feel, that any attempt at dual editorship and divided responsibility will eventually and, indeed, almost inevitably fail. This is an opinion held, as I know, and held strongly, even by those members who, as a matter of expediency, have in all good faith suggested this arrangement to which I have alluded. It being impossible therefore for me to assent to this suggestion made, though it has been by men whose sole object is the welfare of the *Gazette*, the question still remains what way shall we—for however widely divided we may be in many matters, we are one in our interest in the success of the *Gazette*—what way shall we take in order to arrange satisfactorily for the future editing of the *Gazette*? Now, there is one man, and so far as I know, only one, who is able to help us out of the difficulty, and I need hardly say that that man is Dr. Knaggs. It is true that a majority of votes have been cast in my favour to-night, but I am aware that many members have been kind enough to vote for me on the ground that, owing to the accident of my having been secretary during this past year, I have played a somewhat prominent part in the matter of the purchase of the *Gazette*, so that a number of votes must be discounted. And, moreover, and this is the salient advantage that Dr. Knaggs possesses beyond the fact of his having already had experience in the editing of a medical paper, he is a man whose personal popularity is such that he is in a position to carry, and undoubtedly would carry with him, the sympathies of all sections of the profession. I am obliged to confess, Sir, that such would not be my position were I to be rash enough to accept the post on a mere majority vote. Had there been a unanimous, or anything approaching a unanimous desire on the part of members for me to do so, I should, though even then with reluctance, have accepted the mandate and tried to do my best. But I do not feel myself bound by the will of a narrow majority to undertake an office which I should assume with reluctance, and discharge, under such circumstances, with no advantage to the Branch. On these grounds, therefore, I beg, Sir, very respectfully, in the first place, to tender to members my resignation of the office to which they have elected me; in the second place, to offer my thanks, not only to those who voted for me, for the kindly feelings which led them to do so, but also to those who voted against me, for they have relieved me of the necessity of accepting an office which would have entailed considerable self-sacrifice; and finally to move that Dr. Knaggs be requested by this meeting to accept the editorship, on behalf of the Branch, of the *A.M. Gazette*. One word more, and I have done. Should Dr. Knaggs accede to the request suggested, I may be permitted to say on my own behalf, and of those who have actively supported me in this matter, that he shall have undivided and loyal support in the discharge of his onerous duties from us all—such support and sympathy as alone can make it possible for the editor to do his work successfully, and to the best interests of the Branch and of the *Gazette*.

Dr. THRING said, as one of Dr. Huxtable's nominators, he would like to remark that, as far as he personally was concerned, he would gladly assist Dr. Knaggs in his capacity as editor, if Dr. Knaggs could see his way clear to accept the position of editor.

Indeed, he (Dr. Thring) was sure he would have the universal support of the members.

Dr. CRAGO said that Dr. Huxtable had placed the Branch under a further obligation to him by the magnanimous speech which he had just delivered. He, for one, had never doubted Dr. Huxtable's ability for the post of editor, but thought, as Dr. Knaggs had had previous personal experience in that line, and as he was "in touch" with the whole of the members of the profession, that he would be the right man for the post, especially as he had the confidence of Dr. Huxtable's most active supporters, as well as his own. They had, he was sure, all been actuated by the one desire to do what was best in the interests of the Branch, and personally he was very pleased with the solution of the difficulty suggested by Dr. Huxtable, as in the course of the election feelings had been raised which he was sure would now be allayed. He thought their experience of the past few days had been a strong argument in favour of placing the election of editor in the hands of the Council. Although the Council had thought fit to ask for nominations, and to send out ballot papers, it was not required by the Articles of Association, and it was quite competent for this meeting to at once proceed to the election of an editor.

Dr. GRAHAM said that we had had an election for an editor, and the gentleman who had been elected desired that he should be allowed to resign. The members hardly knew where they were, as, if it had been necessary to consult the country members before, surely it would be necessary again to consult them. Again some of the members who were excluded from the editorship, as the result of the arrangement with Mr. Bruck, might now have an opportunity of being nominated.

Dr. CRAGO said that it was quite competent for the meeting to elect an editor.

Dr. SCOT SKIRVING said Dr. Huxtable's speech was magnanimous, and he would be glad if Dr. Knaggs would take the editorship of the *Gazette*. Dr. Knaggs was *persona grata* with the whole of the profession, and would, without doubt, command the support of all the members.

In reply to Dr. Skirving, Dr. THRING, as a member of the Council, wished most emphatically to deny that such a compact between the Council and Mr. Bruck, with regard to the editorship of the *Gazette* as Dr. Skirving hinted at, had ever been even suggested. With regard to Dr. Huxtable receiving the ballot-papers for the editorship of the *Gazette*, the rules of the Branch required that the ballot-papers should be sent to the Secretary, and be delivered by him unopened to the President. This was done, and the papers were opened by the President in the presence of certain members of the Council. The fact that the Secretary for the Branch happened to be a candidate for the editorship of the *Gazette* was a coincidence which could not possibly have been foreseen.

Dr. WORRELL said that every member had had an opportunity of nominating a candidate for the editorship, with the result that only two nominations had been received. If, then, Dr. Huxtable retired, it would be quite reasonable to suppose that Dr. Knaggs' appointment to the position would be acceptable to all members.

Dr. KYANS called attention to the fact that Dr. Huxtable's resignation had not yet been accepted, and that was the first business to be dealt with; then the election of editor could be gone on with.

The President put the question to the meeting—"That Dr. Huxtable's resignation as editor be accepted."—Carried.

Dr. HUXTABLE then moved—"That Dr. Knaggs be requested by this meeting to accept the office of editor of the *A. M. Gazette* on behalf of this Branch." Seconded by Dr. Fiaschi, and carried *nem. con.*

Dr. KNAGGS thanked those gentlemen who had interested themselves on his behalf in the ballot for the editorship. He also thanked Dr. Huxtable for the course of action he had adopted in this matter. He was happy to say that before, and during this contest, the relations existing between him and Dr. Huxtable were of the most friendly character, and that afternoon Dr. Huxtable and he had a most amicable interview, in which they had come to a mutual understanding as to the best course to adopt in the interests of the Branch, and for the success of the journal. Taking all the circumstances into consideration, he had much pleasure in accepting the position of editor of the *Gazette*.

Dr. CRAGO gave notice that at the next meeting he would move,—"That Rule 27 be altered as follows: 'That in line fifteen the words 'a general meeting' be omitted, with the view of inserting 'the Council.'"

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting of the Victorian Branch of the British Medical Association was held in the rooms of the Austral Salon, at 8 p.m., on Wednesday, March 20th, 1895.

The Vice-President, Dr. O'SULLIVAN, occupied the chair, and there were present also, Drs. F. Bird, Meyer, Hooper, Ramsey, Officer, Read, McAdam, Anderson, Syme, Stirling, Springthorpe, Cobb, Mullen, Kent, Hughes, Anderson (A. V.), Black, Norton, and J. Sutherland.

The minutes of the previous meeting were read and confirmed.

The Honorary Secretary announced the election of the following new members:—

Morrison, R. H., M.B. Ed., Toorak.
Norcott, W. B., M.R.C.S.E., Heidelberg,
Officer, D. M., M.B., Melb., Melb. Hospital.
Deane, J. E. J., L.K.Q.C.P.I., Rutherglen.
Lang, M., M.B. Melb., Clunes.
Corry, W., M.D., Q.U.I., Kingston.
Gibbs, R.H., L.R.C.P. et S. Ed., Warracknabeal.
Dickens, F. W., M.B. Melb., Beulah.
Eakins, G. R., M.B. Brux., Echuca.
Skinner, G. H., M.R.C.S.E., Bradford.
Johnston, A. A., M.K.Q.C.P.I., Sunbury.
Jackson, J. K., M.B. Melb., Toorooowangie, Broken Hill.
Harkness, E., L.R.C.P. et S. Ed., Rosedale.
Rabl, H., M.D. Munich, Murtoa.
Smith, R. M., L.R.C.S.I., Drouin.

Letters of apology for non-attendance were read from the President (Dr. Snowball) and Dr. Gardner.

EXHIBITS.

Dr. SPRINGTHORPE then showed:—

(1.) A carpenter, aged 60, who had sustained a severe injury to the neck on New Year's Day, affecting the cervical ligaments and muscles locally, and the nerves, taking origin from the sixth cervical vertebra to the first one or two dorsal, and rapidly recovering from his nerve injury under rest and mild galvanism.

(2.) Tumour of the left temporo-sphenoidal lobe, involving almost the whole lobe, giving rise during life to localised headache, severe optic neuritis and atrophy, and slight vomiting, with, in addition, irritative and then depressant results through pressure on the third frontal and lower Rolandic areas. The tumour itself was a hamorrhagic glioma. The treatment had been misled by an exceedingly good history of syphilis.

Apart from some (?) specific lesion in the spleen, there was no other sign of syphilis. The tumour could not have been removed.

(3). Another case, suggesting a relationship between syphilis and malignant disease. A man, aged 39, operated on in Guy's Hospital twenty-one months ago for syphilitic disease of the left testicle. Six months ago he came into the hospital for (?) sciatica, but was found to have malignant disease of the glands in the left pelvis, with pressure on the anterior crural, obturator and sciatic nerves. Later on, he had pressure on deep and superficial veins. *Post mortem*: There was an enormous fibro-sarcoma lying on and eroding the lower lumbar and sacral spine, with some secondary deposit in the liver. The ureters were involved, and the renal-pelves dilated, though no urinary symptoms had been present during life.

Dr. SYME showed two kidneys which he had removed, and which will be referred to in his paper to be read at next meeting. One was a case of malignant disease of the calculus; the other a very large and extensively affected tubercular kidney.

Dr. O'SULLIVAN exhibited the specimens from a case of ectopic gestation, and also of tubo-ovarian abscess—removed by operation, and gave a full explanation of the development of the latter, and how it differed from "suppurating ovarian hydrocele"—for which it is frequently mistaken.

Dr. O'SULLIVAN regretted the time at his disposal did not allow him to prepare a concise resumé of the cases he had the honour of bringing before the Branch. The series comprised eight Hysterectomies, viz.:—

3 cases Schroeder's supravaginal amputation of uterus, intraperitoneal treatment of stump; 2 cases vaginal extirpations; 2 cases laparo-vaginal extirpations (complete); 1 case extra-peritoneal treatment of stump.

8 cases of Pyosalpinx.

1 case of Pyosalpinx complicated with Appendicitis, (both removed).

5 cases of Chronic Inflammation of appendages (removed).

4 cases of Tubal Pregnancy.

3 cases Salpingo-oophorectomy for hard multinodular fibro-myoma.

5 cases Adenoma of Ovary.

2 cases Diffuse Tubercular Peritonitis.

5 cases Parovarian Cyst.

2 cases Hydrosalpinx.

1 case Hydatid.

2 cases Multilocular Papillomatous Cyst of Ovaries.

1 case Cystic Ovaries (follicular).

3 cases Tubo-ovarian Abscess.

There were many cases of immense practical interest amongst the series, and he regretted very much not having had time to summarise them for publication, as he believed that much more advantage must accrue to the student of gynecology, from a careful study of individual cases, than from a perusal of hackneyed writings on the diseases. The results in the series were eminently satisfactory. For the clinical notes on private cases he was indebted to Dr. Martell, late Senior Resident Surgeon Woman's Hospital. For hospital notes he was indebted to Drs. Sawrey and Reid, Senior Resident Surgeons The Women's and St. Vincent's Hospitals respectively.

Dr. O'SULLIVAN regretted very much that he had been unable to prepare a digest of his cases. He would, however, summarize them for the *Gazette*, and meantime deal with some points that had struck him during their investigation. (1.) Why were so many women invalids after the removal of tubes and ovaries? He

would reply, from leaving a diseased endometrium which was the real cause of the disease, and required complementary curettage. There was no primary tubo-ovarian disease. (2.) The difference of treatment of uterine fibroids, according as they were soft and oedematous, or hard and multinodular. The causation and diagnosis of the former were one of the most interesting of gynecological problems. With Lawson Tait, he held them to be exogenous in their growth, since they die when the capsule is cut. Removal of tubes and ovaries in such was not only worthless, it was fraught with danger of sloughing. He quoted a test case. In another, he had to perforate with a fine trachea before he could find out whether he was dealing or not with a pregnant uterus. The hard, multinodular fibroid, on the contrary, was the tumour of menstrual life endogenous in origin, grew from a dilated arteriole, and was under nervous control. (3.) The treatment of the cut end of the tube. He maintained we were not justified in closing the cavity without taking steps to render it aseptic as by cauterization.

Dr. SPRINGTHORPE referred to Dr. O'Sullivan's position as a pioneer and past-master in his art. Speaking, however, simply from the physician's point of view on the question of causation of female ailments, he considered that we could go further back than the endometrium. In his opinion, there was often a marked hepatic element. The portal stasis and irregular bile separation promoted pelvic congestions, with consequent hyperplasia, catarrhs, dysmenorrhoea, menorrhagia, etc. It was upon this basis that much female disease depended, and in his experience treatment directed to prevent or remedy this hepatic factor was very often most effectual, even when local measures had failed. Of course, operative measures remained frequently a necessity. Even the nervous element was often intensified by this hepatic factor. It was the bilio-nervous who generally suffered. Lastly, unsatisfied, or improperly satisfied sexual appetite was, in his opinion, a prominent factor in causation.

Dr. HOOPER knew Dr. O'Sullivan as a brilliant operator, and had looked forward to his paper. Now, however, he would simply ask a few questions. When did Dr. O'Sullivan prefer curettage, before or after removal of tubes? Was cutting off of blood supply a sufficient reason for the sloughing and sepsis which certainly occurred with removal in soft oedematous myomata? What was his attitude regarding the removal of appendages in young neurotic women? Had ventral hernia supervened from recourse to drainage? How did he prefer to close the abdominal wound? He agreed with the use of the cautery, and had no doubt that the full paper would be most valuable.

Dr. STIRLING had been an admiring witness of many of Dr. O'Sullivan's operations, and as a general surgeon, who had to do many gynecological operations, was much indebted to him. He specially admired his technique and results in hysterectomy.

Dr. SYME had been similarly favoured. He also wanted to know more about the time for curettage. Bland Sutton held it risky if just before the operation. In two cases of pyosalpinx and ovarian abscess, he had curetted first, with good results. He agreed with the use of the cautery to the cut end. The question of the closure of the abdominal wound deserved discussion. Years ago he had maintained that the peritoneum was not so important for union, and advocated rejecting it and bringing the raw surfaces together, as now done by Greig Smith and others. Personally, he declined operating for neuroses, and had seen unsatisfactory results after operation.

Dr. MCADAM, like others, had his curiosity wetted

for the full paper. He would ask if igni-puncture or partial removal had been tried.

Dr. FRED BIRD also congratulated Dr. O'Sullivan. He was specially interested, however, in the technique and treatment of the pedicle. Was not sewing the serous covering over the pedicle as good as cauterization? He would try to sew up the abdominal wound by a magnified Lembert suture. Intestinal adhesions were at times the cause of after-trouble. How much hæmorrhage should be allowed before seeking after the cause in the operation?

Dr. MEYER, as a colleague, attributed Dr. O'Sullivan's brilliant results to great skill and scrupulous attention to details. He regarded indiscriminate oophorectomy as a criminal wrong. Many ovarian neuroses were not due to the ovary at all. Abdominal surgery was uncommonly full of difficult diagnoses, and the operator must be prepared for all emergencies. Though agreeing in the main, he had had one case of good results after removal in soft myomata. Pozzi himself was more in favour of igni-puncture than partial removal, but considered it applicable only in rare cases. Martin, of Berlin, had reported two pregnancies after it.

In reply, Dr. O'SULLIVAN deprecated extreme laudation. He admitted that portal stasis had much to do with the results of treatment, and aggravated symptoms, and devoted extreme attention and care to its prevention, but could not consider it *per se* as a cause of pathological conditions of tubes and ovaries. Douching, as frequently performed, might add to pelvic congestion. It should be continued for at least twenty minutes, and with water at 115°. The successful gynaecologist must be a physician also. Pelvic congestion was generally due to arrested development of the uterus, and consequent want of regular catamenia: The time for performing the curettage must be left to the surgeon. Advanced American opinion did not agree in condemning primary curettage *in toto*. It was erroneous to suppose that atrophy of the soft myomata came from cutting off the blood supply. This was very small, and the myomata but lowly organised tissue. They died from cutting the capsule. He condemned removal of tubes and ovaries for neuroses in all moods and tenses. It was a mutilation, and unsound surgery. Infantile uterus was the commonest cause of such neuroses, and the best results followed continuous dilation and packing the uterus. Thus the sterile could become pregnant. Mortality tables went with him for nought. As regards the closure of the abdominal wound, there never was firm union of the peritoneal surfaces, unless the endothelium was rubbed off, or the opposed peritoneal surfaces exposed so as to get fibrinous exudate. The outer surfaces might be brought together with a continuous Lembert suture. He regarded ignipuncture as scientific, and applicable in dropsy of the follicles, where there was no pus, and no probable sterility. As regards technique, he believed in getting into the abdominal cavity as quickly as possible, and reserved the toilette for cases where there was a suspicion, or worse, of sepsis, using for choice a weak saline solution. He had closed up at least a dozen cut ends without drainage, after using the thermo-cautery. He had even cauterized the cut end of the appendix in appendicitis with good result. Regarding diagnosis, often nothing more than approximate diagnosis was justifiable, certainly frequently betrayed an utter want of knowledge of the subject. He admitted the good result in Dr. Meyer's case, but questioned whether it was not really a degenerative softening of a hard myoma, and not a true soft oedematous growth. He thanked the members present for their kindly hearing.

Dr. STIRLING then read his paper, "Notes on three cases of Intestinal Gangrene."

THREE CASES OF INTESTINAL GANGRENE.

By R. A. STIRLING, M.B., SURGEON TO THE MELBOURNE AND ST. VINCENT'S HOSPITALS.

CASE I.—STRANGULATED GANGRENOUS HERNIA —PRIMARY RESECTION AND IMMEDIATE UNION OF THE BOWEL-ENDS—RECOVERY.

If the experience of the Melbourne Hospital can be taken as a guide—and it is only in such practice that one meets with a number of examples—cases of strangulated hernia, in which the intestine is absolutely gangrenous, are not very common. Since 1877, I have had an almost uninterrupted opportunity of watching the records of others, or of operating myself, and can only recall about half a dozen instances, although there are admitted between twenty and thirty cases of constricted rupture annually. The classical picture of the signs of gangrene drawn in books is not always borne out in practice, for they may be absent, and yet gangrene be found, or present and the bowel be in a recoverable condition—some people bearing even a moderate pressure on the gut so badly as to counterfeit the more serious state.

A Chinaman whom I sent to the hospital some years ago for operation, and who walked there unconcernedly—several hundred yards—was operated on by Mr. Ryan. There were over twelve inches of putrid intestine in the sac. He was an opium-eater, and possibly all the symptoms had been masked by that drug.

Recently, I assisted a friend in a kelotomy. The patient, a young, strong-looking man, told us that the hernia had only been down eight hours, and his constitutional state was remarkably good. The bowel was gangrenous. This one would think record time for unmistakable gangrene to set in, but Erichsen records a parallel case, and Macready, in his book on ruptures, has known it to occur in so short a time as four hours.

On Sunday, Oct. 28th, 1894, Charles H., æt. 57, a cook on a station, was admitted to the Melbourne Hospital at 10.15 a.m. He stated that he had been out of sorts for some time past, and that three days ago, while lifting a quarter of beef, he was seized with an acute pain in the right side, running down into the testicle, and for the first time he detected an unusual swelling in the

scrotum. He knew this to be a hernia, as he was ruptured on the left side on which he does not wear a truss, and because he had suffered from strangulated hernia three times before, always on the left side, always apparently inguinal, and had been operated on first at Mansfield by Dr. Reynolds (he cannot give the date), then at Port Albert Hospital, and several years ago at the Melbourne Hospital by W. Fitzgerald.

With the appearance of the swelling in the right side, he became constipated absolutely, and six hours subsequently vomiting set in. For three days he lay in his hut unattended, vomiting almost continuously, and was then brought to Melbourne by goods train, a journey of 120 miles. The vomiting for some hours before admission had lost its smell, and seemed to be only excited by taking anything into the stomach.

On admission, the patient, an old, weakly man, seemed worn out by the vomiting and the journey; he complained of thirst, a bitter taste, had a dry coated tongue, a small compressible pulse 99, and a temperature of 96.6. In the right inguinal region, and filling the scrotum on that side, is an oval tumour, hard, without impulse, the skin over it unaffected, and not very tender. In the left inguinal region and scrotum there is a reducible hernia, and over it a linear broad scar of the previous operations. Under chloroform, an incision three inches long was made down to the sac, which was soon seen to be gangrenous, a quantity of dark grumous fluid escaping from it. The imprisoned gut, some four-and-a-half inches of the ilium, had lost all its lustre, tore like wet brown paper, and was very tightly nipped at the internal ring. The sac was now thoroughly cleansed, the constriction divided in the usual way, and a knuckle of healthy intestine drawn down on each side. The abdominal opening, which had been well enlarged to allow of this being done, was then plugged with iodoform gauze. There were no signs of general peritonitis. The gangrenous part was now excised with a pair of scissors, and also a semi-circular part of the mesentery corresponding, two small vessels bleeding, which were clamped. The bowel was emptied of its contents into a dish, and the ends held by an assistant. The mucous membrane of the bowel prolapsed, but could be readily turned in by following the device of Greig Smith—inserting two long catgut threads through the peritoneal and muscular coats at each angle of the apposed ends. The mesentery was first dealt with by a double layer of catgut sutures on curved intestinal needles, the tying of the sutures stopping all oozing. The finger in the lumen of the bowel now assisted the most delicate part of the suturing at its mesenteric

attachment, a double row of Lembert's sutures being passed through the peritoneal and muscular coats; forty similar sutures, and a double row of ten on each convexity of the bowel completed the junction of the intestine. The sac was now carefully sponged out and irrigated, intestine returned into the abdominal cavity, the wound filled with iodoform gauze without suturing. The anæsthetic, after the first few minutes, was ether, which was well borne. The operation lasted one hour.

4 p.m.—Pulse has improved considerably. He has had no vomiting.

29th November, 1894.—Patient feeling much better; has not passed flatus by the bowel, and is troubled with gaseous eructations by the mouth; no abdominal distension; no leakage from the wound; tongue moist; ice only by mouth; nutriment and stimulant enemata.

10 p.m.—Hiccough and vomiting troublesome; no pain.

30th November, 1894.—Looks anxious, low; persistent hiccough. Ordered tablespoonful doses of haustus domesticus every three hours; after the third, vomiting set in, but shortly afterwards passed flatus by the bowel for the first time. The pulse in the morning was 98, and of fair volume; it rose to 107 and became irregular towards evening. He had snatches of sleep off and on during the day, but was much troubled with hiccough.

31st October, 1894.—Reading newspaper this morning, and is free from hiccough. Allowed to take milk per orem.

1st November, 1894.—Passed a fluid stool naturally. The further progress was uneventful. He was allowed to get up on the seventeenth day. I am indebted to Dr. Molloy for assistance during the operation, and to my house surgeon, Dr. Officer, for these notes, and the valuable help he gave me in the after-treatment.

NOTE.—For success in any given case, the resources of a hospital operating theatre are almost essential. The canal must be freely opened, the healthy bowel well drawn down, and the loop, especially the efferent portion, kept away from the abdominal cavity during its emptying. The resection should be made through healthy tissue, and the weak portion of the junction, at the mesenteric border, carefully sutured. The causes of death are said to be:—

1. Secondary gangrene of the sutured intestine.
2. Peritonitis, due to infection of the sac.
3. (Exceptionally)—A contraction of the intestine at the seat of the sutures, leading to complete obstruction.

CASE II.—GANGRENE OF THE APPENDIX VERMIFORMIS—SPREADING TO THE CÆCUM AND ASCENDING COLON.

A boy, *æt.* 19, was suddenly seized with abdominal pain, chiefly referred to the umbilicus, on the night of Sunday, January 13th, 1895, after a hearty supper of apple tart. He was admitted to the Melbourne Hospital on January 18th, 1895, under Dr. Nihill's care, and I saw him a few hours afterwards, with a view to surgical interference. He was vomiting yellow bilious fluid stuff, with a running pulse, diaphragmatic breathing, and a subnormal temperature. His abdomen was distended tympanitic, and there was no particular point of tenderness more marked in any one spot than another. Dr. Molloy, who had examined him a few hours earlier, was satisfied that the peritonitis was then more localised, and in the R. inguinal form, whereas now it was manifestly general. The constitutional symptoms also agreed with the probability of some such accident as the flooding of the peritoneal cavity with abscess contents, or some perforative complication, and it was decided to operate.

Operation at 5 p.m.: The incision, three inches long, at the outer border of right rectus, ending just above Poupart. Omentum presented; passing the finger into the iliac fossa, having first shut off the peritoneal cavity by plugging, fæcal-smelling pus freely welled up. The cæcum was not much distended, but covered with lymph; the appendix, about three inches long, lay behind it, and had a mesentery of its own to within half-an-inch of its free end. It is said that the mesentery, not being attached the full length of the appendix, allows of some flexion and gangrenous perforation. The outer one-and-a-half inches were gangrenous, and there was a perforation, possibly caused by the pressure of a large clayey lump that had become impacted in the lumen. The mucous membrane of the appendix was gangrenous for one-and-a-half inches.

The appendix was ligatured and removed, free irrigation of the field, and the usual dressing and drainage.

On the following day, up to 2 p.m., his temperature was normal, pulse 96, no vomiting; but after that time vomiting of dark coffee-ground material set in, and he died during the night.

EDWARD BUNCE.

P.M. NOTES: BY DR. OFFICER.

On opening the abdomen, the coils of intestines were seen to protrude readily through the abdominal incision, and there was a good amount of abdominal distension, a great deal of it probably *post-mortem*, as decomposition changes had advanced somewhat.

Small Intestines.—These were a good deal distended, and were seen to be covered here and there, in a patchy fashion, with some flakes of lymph recently effused. This effusion of lymph was more marked in those coils which occupied the lower part of the cavity and the pelvis, and the lymph deposit was especially marked near the site of the appendix in the right iliac fossa, and these flukes served to attach the coils more or less to one another. It was recent effusion, as there was no organisation and no new vessel formation in any part. In some places it presented a granular appearance.

Stump of Appendix.—This was rotten, and the adjoining part of the cæcum as well as the stump was dark and gangrenous. The stump of the appendix bore rather readily, and its opening was patent partially, and a probe in passing met with no resistance, the inner coat of the appendicular stump was a little averted.

Cæcum and Colon.—The cæcum and colon were not distended very much, but the part of the cæcum near the site of the appendix was dark in colour, the dark coloration evidently being continuous to that of the appendix. This gangrene was seen to be continuous with a similar pathological condition of the ascending colon. This part of the colon was its posterior and posterolateral aspect. There were some flakes of recently effused lymph deposited on the ascending colon, and some of the coils of small intestine were partially adherent to the lower part of the ascending colon.

Other organs were not examined, as permission could not be got to do a complete *post mortem* examination.

CASE III.

Mary B. was admitted to a medical ward on November 27, 1894. Two feet of her small intestine were protruding through the vagina in a gangrenous state, and looking remarkably like umbilical cord that had been exposed for some time. The intestine had escaped from the pelvis by the os uteri. The woman was much collapsed, and it was decided to call a consultation at once.

On inquiry from her husband, we learnt that she had been suffering from what had evidently been judged to be a miscarriage, and the prolapse of the intestine had resulted from efforts to remove the ovum. To give the patient a possible chance, I operated, opening the abdomen, and found a transverse rent of considerable size in a non-pregnant uterus, through which intestine had been drawn down, and had become gangrenous by the contraction of the uterus. A large part of small intestine that remained in the pelvis was destitute of its

serous coat. The dead bowel was removed in the usual way, and a circular enterorrhaphy performed. The pelvic peritoneum, which was much soiled, having been well washed out, the uterus and vagina were tamponated with iodoform gauze.

She never recovered from the collapse, and died about eight hours after the operation. At the *post mortem* there were no signs of general peritonitis; the uterus was very slightly larger than normal, but was not a pregnant uterus; there was no disease of the uterus, and the other organs were quite healthy.

Dr. BIRD had been struck with the magnificent success of Dr. Stirling's first case. He had not attempted the usual treatment, but taken the greater risk, and the result justified his judgment. He maintained that history and symptoms were no certain guide to ascertaining the condition of the gut. The sac must be opened, and this minimised, rather than increased, the danger. He mentioned a case in which he had operated with good result, in which there was nothing but a slight lump in the femoral canal.

Dr. KENT-HUGHES asked whether the gut above had been much dilated, and whether Dr. Stirling advocated resection against simple opening.

In reply, Dr. STIRLING said that recent authorities recommended resection, though the text-books still advocated simple opening. Unlike Dr. Hughes, he had never seen a case of recovery after the latter. Fortunately, in his case it was the small intestine that was affected, hence there was no difficulty in approximating the cut ends.

The meeting then adjourned.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE monthly meeting was held at the Adelaide Hospital, March 28th, 1895. Present:—Dr. T. K. Hamilton, (President), Drs. Giles, J. C. Verco, Hayward, A. A. Hamilton, Clindening, Stewart, Perks, W. A. Verco, Irwin, Evans, Marten, C. Magarey, Teichelmann, Hone, Poulton, Symon, Fischer. Hon. Sec., H. Swift.

Visitors: Dr. Henry Giles, and Mr. Isbister.

LIVING EXHIBITS.

Dr. Martin showed a child upon whom he had performed tracheotomy for a melon seed in trachea. He had stitched wound in trachea at the time at the suggestion of Dr. Swift. Complete success, as it healed by first intention.

Dr. Giles showed a woman upon whom he had operated for cleft palate with success. Also a girl whose knee-joint he had erased with splendid result with a moveable joint.

Dr. Verco showed his patient with arterio-venous aneurism.

Dr. Swift showed a child, *et. two years*, upon whom he had operated in December for congenital umbilical hernia. At that time he ligatured the sac and stitched up the wound with three rows of sutures. The wound

healed by first intention; there was one small stitch-abscess. A month after the child was up the hernia came down again, and the opening felt larger than before. Six weeks ago he again operated. Having passed three deep sutures, he then ligatured the sack; then passed a continuous suture through the deeper part of wound and sheath of the tendon of the rectus. He afterwards passed six buried sutures—as in stitching up the wound of a ruptured perineum—so as to bring the deep parts in apposition. Having tied the three deep sutures, he drew the skin edges together with one or two horsehair sutures. The wound united throughout, and is now apparently quite firm; but there is a suspicious spot at the upper limit of wound, as though the cicatrix were yielding.

Dr. Irwin, for Dr. A. E. Wigg, a boy who was much cyanosed with clubbed fingers, but no murmur to be heard in the heart.

Dr. T. K. Hamilton exhibited a case of *filamentary keratitis* in a woman aged 67. For some six or seven years past she has been suffering from recurrent attacks of keratitis of the right eye. Lately these attacks have become more frequent, and now recur at intervals of every few days. The affected eye is highly myopic, and there are some lenticular and numerous vitreous opacities with advanced choroidal atrophy involving the macula; V=h.m.

After a few days observation of the case, the usual train of symptoms were noticed, viz., moderate ciliary and conjunctival injection, with photophobia, lachrymation and tolerably severe pain. On the upper part of the cornea small transparent, spherical elevations were seen at the commencement of each attack, and later on each spherule was transformed into a filament varying in length from .25 to .50 c.m. Dr. Teichelmann has kindly mounted one of these filaments (exhibited). The specimen shows the two distinct parts which are characteristic of these formations, viz., the axial part, which extends through nearly its whole length, consisting of fibrils twisted together to form a rope, and the envelope, which has a striated and more or less fibrillary appearance.

Filamentary keratitis has, as pointed out by Nuel, of Liège, been, until recently, confused with vesicular or bullous keratitis. This authority has contributed two special articles on the subject to the *Archives of Ophthalmology* (October, 1892, and April, 1893), in which he shows that it is a distinct variety of corneal trouble and he presumes that the confusion has arisen from mistaking the spherules—which appear before the filament is formed—for vesicles.

The form of keratitis under consideration is, according to Uhlhoff, comparatively rare; one case only is found in every 6,000 of diseases of the eye. It is usually found in eyeballs otherwise diseased, and is most intractable.

The President showed several very interesting pathological specimens.

Dr. Marten showed a complete cast of female bladder. The patient had been suffering from typhoid.

Mr. E. Teichelmann showed—(1.) the left Fallopian tube and ovary from a case of ruptured tubal pregnancy. The Fallopian tube was much dilated, its walls thickened, and it had ruptured into the broad ligament, forming a large cyst. This cyst contained a considerable quantity of thick muco-purulent fluid, a thin walled membrane (?—amnion) adherent to old blood-clot and degenerated choroidal villi. The ovary was in a sloughy condition, like wash-leather. The operation took place about six months ago. A fecal fistula resulted. The patient has since done well, having gained two stone in weight, although a slight fistula

still exists, no fecal matter having come through for a considerable time. A microscopical section of the tube wall was shown; this exhibited tubercular degeneration. (2.) Also, the appendages of a woman who had suffered from gonorrhoea about four years ago. Constant trouble ever since—sterility. The outer extremities of the tubes were completely obliterated. The tubes presented an appearance something like a small cystic ovary, and when cut into were shown to be composed of numerous small cysts, the contents of which were nearly, but not perfectly clear. There had been numerous adhesions to the bowel on both sides. Operation on Sunday last; patient doing well. (3.) Microscopic sections of a three-weeks-old ruptured tubal pregnancy (from uterus) and of a normal tube in the same region, for comparison.

PATHOLOGICAL SPECIMENS EXHIBITED BY THE
PRESIDENT (PROF. WATSON).

1. Central sarcoma of head of fibula. It is of the giant-celled variety and presents the usual egg-shell crackling.

2. Parovarian cyst from a girl aged 15, who died of double pneumonia, induced by diphtheritic paralysis of the diaphragm.

3. Quiescent, bony ankylosis of knee-joint from a man *et.* 27, at whose request the wasted leg was amputated after 17 years of disuse.

4. Kidney with multiple calculi, one of which blocked the ureter.

5. Left kidney, presenting scattered abscesses, infarcts and purulency of pre-existing cortical cysts. The kidney lay in contact with a suppurating hydatid sac of the spleen.

6. Portion of a liver presenting a thick cluster of small congenital cysts. The question presents itself as to what influence such a condition might exert on the development of hydatid cysts, should such a liver become infested.

7. Series of specimens of cysti-cerci, *Cœnurus*, Exogenous echinococcus cysts, bone hydatids. Peculiar form of *tænia* infesting the mesentery of the snook fish. The microscope showed it to be a *tænia* with a bladder-like terminal proglottis containing ova, and not a real bladder stage of a *tænia*, such as *cysticercus tenuicollis*. The presence of *tænia* outside of the intestinal tube is remarkable.

8. Ossification in adventitious capsule of a splenic hydatid taken from a man *et.* 40. Sclerosis and calcareous deposit led to the formation of foci of a degraded type of bone. This calcareous, and to some extent osseous, transformation had proceeded to such a degree that the use of a saw was necessary to effect an opening in the adventitious capsule. Septic changes had taken place within the sac, probably from the vicinity of the colon to the splenic flexure of which it was adherent. The patient died six months after the operation of gangrene of the lung, following perforation of the diaphragm, and also of the colon.

In such a case, the capsule, after evacuation of the cyst, cannot well collapse, even apart from calcification. The capsule of a splenic hydatid collapses less than that in any other viscus in the body.

Dr. Clindening proposed and Dr. Perks seconded, "That, owing to the lateness of the evening, the minutes be taken as read." Carried.

Dr. John Smith Proctor, of Happy Valley, was balloted for, and elected unanimously.

Dr. J. C. Verco read his paper. Discussed by the President, Drs. Clindening and Teichmann.

The President read his paper.

POSSIBLE ANEURYSMAL VARIX OF
THE LEFT INNOMINATE VEIN.

By J. C. VERCO, M.D., LOND.

A. G., boy, aged twelve years, was brought to see me on 17th February, 1894, for fits. They began when he was eighteen months old. If he could not have his own way, he would throw himself back, convulsions of his limbs would occur; he would get black in the face, and foam at the mouth. Afterwards he would be very sleepy, and seem listless for the rest of the day. Sometimes he had two or three in one day; but they became gradually less frequent, and disappeared altogether at three-and-a-half years of age. Twelve months ago fits recurred. At first they came in the night; if lying on his back, his breathing would get very noisy, and grow harder, until he had convulsions just like those in childhood. If turned on his side, when the noisy breathing was noticed, it would pass off, and no spasms would supervene; but, if now left alone, he would roll on his back, and the noisy breathing would end in a fit. He might have these two or three times in a week, and then have an interval, perhaps of two or three months. After a few months, they began to occur in the day. He had had about six altogether, one while milking a cow, one when cutting some wood, and one while seated at dinner. He completely lost consciousness in them. His father did not know whether they were unilateral. He had been subject to no cough, except when he would get a common cold. He had had no illness other than the measles. He was not so lively as his younger brother, nor could he run so well, and was less in height, and three or four pounds lighter. He was a rather delicate-looking lad, with a somewhat dull expression. His complexion was very clear, not at all anæmic; in fact, his cheeks were rosy, though with a somewhat purplish, plum-coloured tint; there was not the slightest clubbing of the fingers; his pulse was 72, regular; his heart's apex beat was felt in the fifth space, a little inside the left nipple line—the impulse rather forcible. On standing, a thrill could be felt on the left side of the neck, beneath the sternomastoid, beginning above the clavicle, just outside the attachment of that muscle, and extending up the neck for an inch and a-half, and also outwards just above the clavicle to its middle. It was continuous, with a slight systolic increase; no thrill was palpable on the right side. On both sides the pulse in the carotid arteries was quite normal, and in the subclavians. There was no

visible fulness of the cervical veins, nor any difference in time or force between the radial pulses. On auscultation, a very loud humming murmur was heard, with its seat of maximum intensity over the left clavicle, about an inch and a-half from its inner end. It was continuous, with a distinct systolic increase, and was more marked in the recumbent than in the erect posture. From this point it was traceable obliquely downwards and inwards across the sternum from the left first interspace to the right second cartilage, with gradually diminishing intensity. From this oblique line it rapidly faded, and was lost at the left third space, and thence to the apex only the normal cardiac sounds were audible. At the second left interspace, and at the right, the normal heart-sounds can be heard quite distinctly and pure, while the murmurs are manifestly superadded. From the clavicle the murmur could also be traced up into the neck on the left side, and cutwards along the line of the left subclavian and axillary to a point below the insertion of the pectoralis major into the humerus. The murmur could be detected, but very faintly, as far as the mid-point of the right clavicle.

I have brought this case before the Society because of the unusual physical signs of circulatory disorder. The thrill in the left internal jugular and left subclavian veins, and the murmur, audible along a line passing obliquely downwards and inwards to the right second cartilage—that is, along the line of the left innominate vein—make it fairly certain that they are produced in this vessel and conducted along its main branches. The character of the murmur—a continuous rough humming, with a distinct systolic increase—suggests, at least, and we are disposed to say, proves, the existence of a communication between this vein and one of the large arteries adjacent. The communication may be with the left subclavian, the left carotid, or the innominate, all of which pass upwards behind the left innominate vein, or with the aorta, which lies below it. I am disposed to think it is not with the innominate artery, as that is too far to the right for the maximum intensity of the murmur an inch and a-half along the left clavicle. The aorta, slightly beyond the middle of its arch, or the carotid, would best explain the signs. And of these, I should choose, perhaps, the carotid. It comes into closer proximity, as it passes behind the vein, than the distal half of the aortic arch. And the absence of any venous distension in the neck, or œdema, suggests a vessel of smaller size than the aorta, and one from which an arterial stream would issue, not of sufficient force to cause venous obstruction. Of course, a small orifice

of communication with the aorta would fulfil necessary conditions; but I lean to implication of the carotid.

Since forming my conclusion as to the nature of the case, and while looking up the literature of allied diseases, I found a paper by Pepper and Griffith in the *International Journal of the Medical Sciences*, for October, 1890, upon "Communication between an aortic aneurism and the vena cava forming a varicose aneurism." They discuss exhaustively the accidental bursting or erosion of an aneurism of the aorta into the vena cava, so as to produce a varicose aneurism. They gather from a large number of collected cases that a continuous murmur with systolic increase is pathognomonic—when it is audible—of such arterio-venous communication. I will give their remarks upon this point:—

"One of the evidences of such a condition is the existence of a murmur characteristic of a communication between an artery and a vein. When this murmur is present, the existence of a varicose aneurism becomes practically a certainty. Thurman first explained the nature of this murmur as occurring in spontaneous varicose aneurisms of the aorta, and dwelt upon its diagnostic importance. Its extremely loud and distinct character is due to the small size of the opening. The chief feature of the murmur is that it is *continuous*, this being due to the fact that the passage of blood from the aorta into the cava is a continuous one. During the systole the pressure is at its height, and the sound is consequently loudest and highest pitched. During the diastole the current from the artery to the vein depends upon the elasticity of the arterial system acting upon the contained blood. The murmur is, therefore, still audible, though continually growing fainter and lower pitched until the next systolic intensification. The maximum of intensity is generally near the second right costal cartilage. A continuous murmur would seem almost necessarily to owe its existence to a varicose aneurism. Neither a simple aneurism, nor any form of valvular disease could produce the continuous sound, since there would need be a short interval between the systolic and diastolic portions. That the peculiar continuous murmur is pathognomonic of a varicose aneurism was recognised and maintained by Thurman. In some cases only a systolic murmur is present, which is explained on the ground that the very marked disease existing in the arterial walls interfered with the arterial contraction during the cardiac diastole, and in this way produced the absence of the diastolic part of the murmur. In still more cases there is a distinctly double murmur, with an interval between the two parts.

It is, therefore, evident that the continuous murmur is not an essential symptom of varicose aneurism, though such a valuable sign when present. The maximum intensity of the murmur, of whatever nature, is nearly always on the front of the chest, in the neighbourhood of the first portion of the arch of the aorta, or over the abnormal centre of dullness."

The case I record is not a varicose aneurism, but an aneurysmal varix, probably—some simple communication between an artery and a vein, without any aneurysmal tumour from the arterial wall.

In my case, probably the circulatory defect was responsible for the delicate plum-bloom complexion of the lad, owing to impeded return of blood through the internal jugular, though the impediment was unilateral, and for the convulsive attacks. Their excitation in infancy by passion, which would induce greatly increased arterial pressure, with impeded return of blood from the brain, suggest this relation.

If the fits were due to the communication, this is almost certainly congenital (or else must have been effected very early in life), for they began when he was only eighteen months old. As to the cause of such communication, I am not acquainted with any normal embryonic communication which could persist as a teratological condition. And apart from this, one can but indicate possibilities, such as a softening gland opening into both vessels.

The text-books in my possession do not refer to any such condition as a communication between a thoracic artery and vein, and do not give any of the physical signs. I have looked through a number of works on disease of the heart and great vessels, in order to learn what physical signs attend the different abnormal communications which occur between the two sides of the heart, or the vessels which arise from it in congenital disease of that organ; but though these signs have been fully described, and indicate considerable variety, I have not yet been able to find a description which would apply to the signs presented by this lad. I am, therefore, disposed to regard it as not falling within the term, comprehensive though it be, of congenital morbus cordis.

It was clearly not a form of *bruit de diable* due to anæmia, or any such condition, for the lad was by no means anæmic; there was a marked palpable systolic venous thrill; the murmur was far more audible on the left side than on the right, was plainer when the lad was recumbent than when erect, and was audible not only over the point of junction of the left internal jugular and subclavian veins, but over the left brachial vein on exertion.

HYDATID OF BONE.

By PROFESSOR WATSON, M.D., F.R.C.S.,
ADELAIDE UNIVERSITY.

I HAVE been asked by our esteemed secretary to complete this evening's programme by discussing certain points in hydatid disease as it affects bone. I have just shown you, by way of contrast, a case where true bone had formed in the adventitious capsule of a splenic hydatid.

I will illustrate my further remarks by specimens of exogenous hydatids from the viscera of the lower animals, and also from the human skeleton, in the cancellous tissue, of which a peculiar variety of the exogenous form of hydatid is prone to occur. I refer to the echinococcus multilocularis, the true nature of which Virchow demonstrated in the liver nearly thirty years before he became quite convinced that the bones of man may also be considered as a nidus in which hydatids may assume the same alveolar or multilocular and multi-cystic features. At first Virchow applied the term ulcerating echinococcus tumour to this variety from the tendency to ulcerative cavitation in the part infested. In executing the task confided to me, it is quite unnecessary that I should enter into a metamorphosis and life history of the *tænia echinococcus*. As you are all aware, the familiar liver hydatid (perhaps the best type of visceral hydatid in man) occurs as a mono-cyst, reproducing its asexual brood endogenously, and, therefore, often containing daughter cysts which correspond in structure and behaviour to the parent cyst.

Bounding the parasite externally is an enveloping tunic of connective tissue, the so-called adventitious capsule, to which, by an erroneous conception of morphological nomenclature, the practice is not uncommon of misapplying the term ecto-cyst.

It is maintained by some authorities, and with good morphological reasons, that the term cyst should be applied to this structure, but the expression cyst has been by most writers so completely linked with the bladder-like organism itself, that it is more convenient to continue it in this latter signification.

When we contrast hydatid disease of bone with that of the internal viscera, we find that the former presents itself, not as a mono-cyst with adventitious capsule, but as a brood of apparently motherless minute cysts without any capsule, other than the endosteum of the bone; isolated vesicles may even lie at a considerable distance from the principal cluster. Illustrative of this latter condition, I show you the upper end of a Tibia harbouring hydatids in the cancellous tissue. From the same specimen you

can also judge of the minute size and the fantastic shapes of the vesicles. Probably the confined spaces in which they have developed have a bearing on their small size.

We may conceive also that inequalities in the resistance offered by the cancellous fretwork to the growing vesicles accounts in some measure for their irregular outline (this apart from an inherent tendency to extrinsic pullulation which they appear to possess). When developed in the medullary canal of the shaft of a long bone, they are larger in size, and of a much less irregular form.

In visceral hydatids it is probable that, like other forms of life, *Echinococcus* cysts may sometimes possibly reach the term of their existence. In bone hydatids, however, suppurative processes or the death of the host anticipate the termination of their natural life's cycle. Virchow mentions a case of a male lunatic, *æt.* 80, in whom hydatid disease of the humerus must have been in existence for at least forty-five years.

In virtue of a special predisposition of nude hydatids to push (even in opposition to the planes of least resistance) into either the surrounding soft parts, or into a pre-existing cavity by absorption of the intervening bone, spontaneous fracture is rendered imminent in shafts of long bones. If cancellous bone is infested, a bulging, simulating a sarcoma, is produced. If septic contamination has occurred, suppuration ensues, and an anfractuous abscess cavity is formed, containing osseous necrotic particles and other products of disintegration of the parasite and of the bone, the suppuration spreads to the soft parts and burrows, forming irregular abscess cavities lined with semi-organised granulation tissue.

It is interesting to bear in mind that cases of cranial hydatids have actually ended in recovery where perforation of the skull in the above manner has facilitated their subsequent evacuation by puncture.

I have seen an ordinary single hydatid cyst developed in the white substance of the right frontal lobe, co-existing, but unconnected with a second cyst growing inward from the cerebral aspect of the external angular process of the frontal bone.

Professor Allen, through whose kindness I saw the specimen, was inclined to regard this duplicity as the outcome of a double parasitic deposit by the external and internal carotids respectively.

Professor Allen also showed me the vault of a skull (sent from Deniliquin), with several perforations due to multiple hydatids, said to

have been cerebral in origin, though personally I should have regarded them as cranial.

When the multilocular form found in cancellous bone pushes through into the surrounding tissues it behaves itself like ordinary hydatid. Here is a piece of muscle which, from the coarseness of its fasciculi, I should judge to be the *gluteus maximus* in which is an ordinary monocyte the size of a walnut, with a very well-defined adventitious capsule; it would in all probability have eventually given rise to an endogenous brood. In the same bottle, doubtless from the same individual, is a human coccyx and a fragment of cancellous bone (?—sacrum) dotted with small white embedded vesicles, no bigger than pins-heads. It is evident that in this case there was no suppuration. Nothing is known of the history; it was found by me ten years ago (when cleaning out the old dead-house) with some bone specimens labelled 1856. In Melbourne I saw similar small vesicles in the cancellous tissue of the sacrum. Extension had taken place into the spinal canal, which was occupied (apart from the *Corda Equina*) by flattened hydatid vesicles like grapeskins. I may say that as regards the multiplicity of the vesicles, heads are much less often detected in them than one who held that every vesicle proceeded from a separate scolex would anticipate. It is probable that many of the vesicles are the result of centrifugal pullulation of barren (as regards scolexes) cysts. In any case the multiplication takes place "in loco," as one can hardly imagine the transportation by the arteries to a circumscribed area of bone of embryos equal in number to the vesicles present. It is also unlikely that embryos would be arrested in the coarse capillaries of bone after having successfully traversed the finer capillary circulations of the liver and the lung. As a matter of fact, in the great majority of cases where a multitudinous development is in progress in some part of the skeleton, the liver and the lungs have escaped the effects of parasitic invasion altogether. The multiplicity is regarded by some as the result of a rupture of a mother cyst and discharge of its contents into a pre-existing cavity. I have seen a plurality of vesicles removed from the Antrum of Highmore in one case, and from an abscess cavity between the *serratus magnus* and the ribs in a second case. Both of these cases were treated as caries of bone for a considerable time, before the true nature of the disease became apparent. Older authors attributed the multiplicity to a larval species of a *tænia*, other than the *tænia echinococcus*. As in the recent feeding experiments of Von Klemm the ordinary *tænia echinococcus* resulted from ingestion of

multilocular hydatids of liver by dogs, we may rest assured that the special attributes of the ordinary endogenous hydatid of the visera, as well as those of the exogenous variety and of its sport, the *E. multilocularis* of cancellous tissue (and of liver) are determined by the physical and physiological characters of the nidus in which the hexacanth embryo comes to rest.

I have already drawn your attention to a specimen where hydatids of bone had behaved like ordinary hydatids on invading the surrounding soft tissues "*per continuitatem*" (in contradistinction to vascular transference).

The circumstances which influence the distribution of skeletal hydatids cannot be satisfactorily accounted for by the theory of vascular transference alone. As regards the paths of transit from the frequency with which hydatid cysts are found in the liver, it is reasonable to suppose that the usual, or at least frequent course of the embryos is into the portal system in which they have actually been found by Leuckart.

Possibly, however, they may push their way amongst the actual or potential spaces of the connective tissue elements of the body, or it may be, though there is no proof, that they may travel in the lymphatic spaces or vessels. Indeed, the deficiencies in our records of hydatids affecting lymphatic glands, and closed lymphatic vessels, is a remarkable fact which must be taken into account when we seek to explain the distribution of the bladders by a mere passive migration.

But whatever the route, or however impelled, the wandering embryo eventually comes to rest; but it must be only in very rare cases that it finds a nidus in bone, as hydatid disease of the osseous system is so very uncommon, on the theory that circulating microbes are prone to settle down in injured parts in such conditions as acute suppurative periostitis, &c., &c.

Targett has advanced the plausible theory of antecedent injury of bone producing a favourable domicile for circulating embryos. He points out that those parts of the skeleton most liable to knocks or jars are also those most frequently infested by hydatids.

From the propinquity of the head of the tibia and the lower end of the femur a fall on the knee-cap might produce separate "*loci minoris resistencie*" in the contiguous ends of both bones, and thus offer a nidus to embryos circulating in the blood of the part.

At any rate, it is not easy to conceive how an extension of the disease from one bone to the other by continuity of tissue (the intervening knee-joint being uninvolved) could occur.

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL SOCIETY OF QUEENSLAND.

THE 99th general meeting was held on 12th March, in the Society's rooms, George-street, Brisbane. Present: Dr. Hill, President (in the chair), Drs. Little, Gibson, Freshney, Thomson, Lawes, Bancroft, Love, Ashworth, Francis, Clowes, Wheeler, Fullerton and Hardie.

EXHIBITS.

Dr. Hardie exhibited a girl, thirteen years of age, who had suffered from an aggravated form of talipes equino-varus. He performed Fitzgerald's operation two months ago, and the result was satisfactory. The tendons of the tibialis anticus and posticus were cut, together with the scapho-astragaloid and scapho-calcaneal ligaments through the same opening, as recommended by Moore. Dr. Hardie exhibited a boy, eleven years of age, the subject of mixed leprosy. He was of English descent, was born at sea on the voyage out, and had never (as far as is known) come in contact with cases of leprosy. Up to the previous week he had attended school in Brisbane. According to the parents' statements the usual thickening and discoloration appeared only about three months ago. The clinical signs were typical of leprosy in the early stage, and these were supported by bacteriological examination. As far as he knew, this was the youngest case of leprosy reported in Australia. Filarie were also found in his blood.

The minutes of last meeting were read and confirmed.

Drs. Ashworth and Orr were unanimously elected members of the Society.

Dr. Francis then read his paper on

PAPILLOMA OF LARYNX.

BY H. A. FRANCIS, B.A., M.B., CAMB., OF
SHERWOOD, QUEENSLAND.

I VENTURE to read these notes on two cases of Papilloma of the Larynx, because I believe laryngeal new growths are very rare in this colony, notwithstanding the fact that many forms of throat and nose trouble are unusually common.

W. J. L., a draper's assistant, aged 19, was sent to me by Dr. Lightoller, of Ipswich, on 19th November, 1894. The only history to be obtained was that he had suffered from slight hoarseness of the voice for six years, which had become much worse during the last few months, and from a slight, but constant cough. Three years ago Dr. Lightoller discovered a growth in the larynx. He examined it from time to time, but could discern no increase in its size, until about three months previously, when it began to grow rapidly.

There had been no pain, no dysphagia or odynphagia, and no distinct dyspnoea, although

he complained of getting out of breath easily when hurrying. When I saw him there was almost complete aphonia. The patient was unable to remain for treatment at the time, but returned ten days later. In the meantime the growth had almost doubled its former size, and there was marked difficulty in breathing. The growth was so extensive that it was impossible to determine its exact seat of origin. It lay chiefly on the right side, covering the anterior two-thirds of the right vocal cord, extending forwards to the base of the epiglottis, partially filling the right ventricle between the false and true vocal cords, and completely occluding the glottis, except for a small space posteriorly (Fig. 1 fairly represents its appearance). It was reddish in colour, with a finely papillary surface resembling a mulberry or cauliflower (*vide specimen*). Dr. Lockhart Gibson kindly examined the patient for me, and agreed with the diagnosis and treatment to be adopted.

FIG 1.

Case I.—W. J. L. Appearance before operation. (*Side has been transposed by engraver's error*).

Having, by a few days' practice, got the patient accustomed to the presence of instruments in his throat, I began, under the influence of cocaine, to remove the growth with Mackenzie's anterior posterior forceps. For the first few days I only removed a small quantity at a sitting, in order not to set up any inflammation, which seemed a somewhat formidable contingency, considering the very narrow breathing channel he possessed. But at no time was there any inflammation or discomfort, as the result of operating, and very little bleeding. When the greater part had been removed, it could be seen that the growth was multiple, and sprang chiefly from the right vocal cord, but also from the anterior commissure beneath the epiglottic cushion, and from the right ventricle. Also a large mass of growth was now to be seen below the cords. When I had removed all the supra-glottic portion the patient was obliged to return to his work for the Christmas season. He returned to me on 2nd January, when I was very pleased to see that there had been no recurrence at the parts operated on, although the sub-glottic portion had increased considerably in size.



FIG 2.

Case 1.—W. J. L. Subglottic growth.

By similar methods I removed this sub-glottic growth, but with some difficulty, as part of it was pedunculated and attached to the under surface of the right vocal cord. It could be seen for a moment only, when the cords relaxed after phonation, and receded behind the cord on the slightest touch. Before he left there appeared a slight recurrence at two spots on the free edge, near the middle of the right vocal cord. These I removed, each being about the size of a pin's head.

The patient returned to me on 28th February, after an interval of seven weeks. I found several small growths on the surface, and free edge of the right vocal cord, and a large growth in the anterior commissure, which gave some trouble to remove, as it could only be seen momentarily when the patient attempted a high E. For the last few days I had been painting the sides of the growth with a solution of chromic acid (gr. vi. ad aq. 3i), an application I have immense belief in, for what one might call its alterative action on unhealthy tissues. I have great hopes that there will be only slight, if any, further recurrence. His voice is now quite phonic, his cough has disappeared, and he is conscious of a feeling of the greatest ease and comfort in his throat, which he is able to appreciate fully having had his glottis more or less occluded for so many years.

I need not detain you long with the history of the second case, as it closely resembles the other.

E. T., a bushman, aged 35, was sent to me on 11th February, from Rockhampton Hospital, by Dr. W. C. Faulkner. He first noticed that his voice became hoarse five years ago, after riding for four weeks in a wet saddle. He seems to have consulted every doctor in the west, from Thargomindah to Muttaborra, and to have tried an infinite variety of gargles, besides absorbing vast quantities of cod-liver oil. His chief subjective symptoms were the feeling of a "lump in his throat," which he was constantly trying in vain to get rid of by coughing, and loss of voice. On examination, a very large growth could be seen which seemed to push apart the vocal cords,

and to be attached to the anterior commissure and the left vocal cord, but I discovered afterwards that by far the greater portion of the growth was sub-glottic (fig. 3 and 4).

FIG 3.

Case 2.—E. T. Laryngoscopic appearance of growths during inspiration.

FIG 4.

Case 2.—E. T. Laryngoscopic appearance during attempted phonation.

This growth was very pale in colour and coarsely lobulated. In the posterior part of the ventricles on each side could be seen a reddish finely papillary growth as big as a pea. During attempted phonation these growths almost touched in the middle line above the vocal cords. With Mackenzie's forceps I removed nearly all the anterior portion (*vide specimen*), thereby again allowing the cords to come into apposition, with the result that his voice has once more become phonic. Unfortunately, the treatment has been interrupted for the present, but before long I hope to remove the remaining portion. These growths differ somewhat from those of the former case. They are what are more commonly found in adults, are much paler in colour, more warty, less finely papillary, and, what is most important, are far less likely to recur after removal.

I may be allowed, perhaps, to mention a few facts with regard to these interesting growths.

Papillomata are by far the most common of all laryngeal new growths, and are found at an earlier age than any other form of tumour. They are sometimes congenital, and nearly all laryngeal tumours in the first decennial period of life are papillomatous.—(Morell Mackenzie).

Their chief ætiological factor is any prolonged laryngeal irritation in certain individuals, consequently, continued over-strain of the voice,

tobacco, alcohol, exanthemata (especially measles and scarlatina) are considered as causes, but they are really responsible only through the chronic catarrh they set up.

Pathology.—They are overgrowths of the epithelial tissue—the epithelial layers do not dip into the struma; but, with the microscope, one can often find *spurious cell-nests* from whorls cut transversely. Although innocent, they have some malignant characteristics, in that they usually grow rapidly and recur. They are credited with the distinction of being the only benign new growths that almost invariably recur.

There are three varieties of laryngeal papillomata, commonly described:—

(1.) Light red; usually solitary or few, which recur slowly, or not at all.

(2.) Whitish-grey; very warty; usually found in adults. Recur only slowly.

(3.) Large reddish, resembling a mulberry; usually multiple; nearly always recur in one to two months. These are said to sometimes undergo epitheliomatous degeneration, but Mackenzie, Wolfenden, and nearly all authorities assert there is no foundation for the statement that malignancy may follow removal, and consequent irritation. In many hundreds of cases operated on only a few instances are recorded in which growths, originally benign, assumed malignant characteristics, and in no case is there any evidence that the treatment exercised an unfavourable influence.—(Mackenzie).

The methods of treatment are removal by intra, or extra-laryngeal operation.

In the intra-laryngeal operations, the means employed are forceps, snares, sponge, on a probe and caustics.

Of forceps, there are various kinds, such as Mackenzie's, Stoerks', Schroetter's, and Fauvel's, etc. Mackenzie's are the safest, and answer best for most cases.

Snares are very useful for some soft growths, but you may hook a fish in the larynx that is difficult to land.

Sponge on a probe, is useful for small multiple papillomata, but often gives rise to much laryngitis.

Caustics are only mentioned to be condemned. The chief extra-laryngeal operations are:—

(1.) Thyrotomy.

(2.) Section of thyro-hyoid membrane.

(3.) Section of crico-thyroid membrane.

The arguments against thyrotomy, which is the most usual operation, are briefly:—

(1.) It may destroy the voice for ever. So it is necessary never to cut completely through the cartilage; the upper portion should be left, in order to ensure proper approximation of cords.

(2.) The cartilage may be ossified, so you may cause fracture and get perichondritis.

(3.) You are apt to get bleeding into the trachea, so that it is better to first do tracheotomy and insert a tampon canula.

(4.) You are apt to have a fistula left.

(5.) You are apt to get cicatricial adhesions between the vocal chords.

(6.) The growths return just as readily as after removal by intra-laryngeal methods.

Dr. LOCKHART GIBSON remarked upon the skill and nicety of operation required for removing so successfully subglottic growths. Dr. Francis had kindly shown him the first case prior to operation. Papillomata of the larynx were extremely rare in Queensland. Previous to seeing Dr. Francis' case he had himself seen no case of laryngeal papilloma in a Queensland adult. If Virchow's division of papillomata be accepted, he had seen two cases, however, in Queensland children. One a case of pachydermia verrucosa, similar to the first of Dr. Francis' cases, and seen some years ago with Dr. Hill. He was operated on by thyrotomy. The other, a most interesting case of pachydermia diffusa, which Virchow distinguishes from the warty variety as being due to hyperplasia of the submucous tissue, only without implication of the mucosa and epithelium. He remarked upon the interesting fact that in both of Dr. Francis' cases portions of the growth were subglottic, whereas, according to Bosworth, Fauvel observed only nine cases of subglottic growth amongst his 300 cases of papilloma of the larynx.

Dr. Wheeler showed a section of a papilloma of the larynx he removed by means of the cautery snare.

Dr. Lockhart Gibson then read his paper on a case of herpes zoster, accompanied by paralysis of the auditory and facial nerves, which will be published in next month's issue.

Dr. THOMSON remarked on the severe pain that sometimes persisted for months after an attack of herpes zoster, and for which he had used several remedies without much benefit. He had not used phosphide of zinc.

Dra. Love, Freshney, Little and Francis also joined in the discussion.

Dr. Ashworth, Resident Surgeon Hospital for Sick Children, then read notes of cases of diphtheria treated by anti-toxin, which will appear in next issue.

THE GAZETTE FUND.

THE following amounts have been credited to the fund by the kindness of members of the New South Wales Branch, who had already paid annual subscriptions to the *Gazette* in advance, before it was decided to supply every member of the Branch with the *Gazette* free of cost:—

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" Heald, Berrigan	0	5 0
" Helsham, Richmond	0	15 0
" Kendall, T. M., Hyde Park	0	15 0
" Kyngdon, North Sydney	0	5 0
" Lee, Wollongong	0	15 0
" McIlroy, Annandale	0	10 0
" McMurray, Sydney	0	15 0
" Machattie, Bathurst	0	1 8
" McSwinnay, Petersham	0	5 0
" MacKellar, Sydney	0	5 0
" Mackillop, Goulburn	0	6 8
" Macky, Glebe	0	10 0
" Mellish, Wallsend	0	15 0
" Norrie, Sydney	0	15 0
" Neill, Double Bay	0	5 0
" Pickburn, Sydney	0	15 0
" Pentland, West Maitland	0	10 0
" Power, Sydney	0	15 0
" Bennie, Sydney	0	5 0
" Reading, Sydney	0	15 0
" Sutherland, Sydney	0	10 0
" Scot-Skirving, Sydney	0	8 4
" Scott, Scone	0	8 4
" Stapleton, Lambton	0	5 0
" Smyth, Campbelltown	0	5 0
" Van Someren, Orange	0	5 0
" Traill, Burwood	0	15 0
" Thomas, Manly	0	15 0
" Thane, Yass	0	15 0
" Twynam, Darlinghurst	0	5 0
" Tennant, Wagga	0	8 4
" Terrey, Kiama	0	15 0
" Vase, Tempe	0	15 0
" Will, Sydney	0	15 0
" Wilson, Warren	0	15 0
" Worrall, Sydney	0	15 0
" Walley, Tamworth	0	15 0

£35 3 4

Additional Contributions to the Fund.

Dr. G. T. Hankins, Randwick ...	...	2	2 0
" Smyth, Campbelltown ...	...	2	2 0
" Hamilton Rowlands, Narromine ...	...	1	1 0
" Colpe, Sydney ...	...	2	2 0
Previously acknowledged ...	...	388	2 0

Total ... 430 12 4

Contributions to this Fund are still being received.

L. R. HUXTABLE, Hon. Sec.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary of their branch in Brisbane.

All communications intended for the Editors may be addressed direct to "The Editors, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors, Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

All business communications and remittances should be addressed to Mr. L. Bruoh, Medical Publisher, 13 Castlereagh-st., Sydney. Telephone No. 1770.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, APRIL 15, 1895.

EDITORIAL.

THE NECESSITY FOR A PUBLIC HEALTH ACT FOR NEW SOUTH WALES.

ALTHOUGH New South Wales is able to point with pardonable pride to many Acts in her statute-book which are copied with success by the older countries of Europe and America, she is far behind the age in providing for the health of her inhabitants. Daily we may meet, in trams and other public conveyances, children suffering from whooping-cough and other communicable diseases, and we are powerless to prevent what must sooner or later lead to serious consequences. We have no power to isolate infected persons, except those suffering from small-pox or leprosy; we have no means of knowing when or where such cases occur, unless, indeed, they terminate fatally, and it is then too late to prevent infection; we have no power to insist upon medical treatment of any description; nor are we permitted even to disinfect the premises where cases of zymotic disease have occurred, and so such premises may remain hot-beds of fever-germs, which increase year by year under favourable conditions of filth, heat and moisture; nor have

we power to destroy premises that are known to be infected with the bacteria of deadly diseases.

A Public Health Act, dealing with these matters, is an immediate necessity. It is urged by some unthinking persons that we cannot make people clean by Act of Parliament; but the good effect of a Public Health Act may be illustrated by the results of such legislation in other countries. In England a Public Health Act came into force in 1872. Until this time the death-rate was 22·6 per 1,000, and there was no indication that the death-rate would fall lower. "But coincidently with the passing of the Public Health Act," says Dr. George Wilson, "the rate began to fall, and continued to fall until in 1881 it was only 18·9. If, then, the death-rate in 1881 had only been equal to the average rate preceding the Public Health Act (1872), there would have died, according to the Registrar-General, in the course of that year alone, at least 92,000 persons who, as it was, survived, and this saving of life he frankly stated was 'the direct product of the money and labour expended in sanitary improvements.'" The death-rate in 1889 was 17·9 per 1,000. In Victoria a Public Health Act came into force in 1890, and the death-rate, which had risen from 14·46 per 1,000 in 1884 to 17·54 in 1889, suddenly dropped in 1890 to 16·10, and in 1892 to 13·63. That these figures are the result of improved sanitation is shown by the fact that in Melbourne and suburbs the deaths from typhoid fever and diphtheria were as follows:—

Before Passing Act.			
Year.		Typhoid.	Diphtheria.
1889	...	559	829
1890	...	403	400
After Passing Act.			
Year.		Typhoid.	Diphtheria.
1891	...	192	145
1892	...	154	88
1893	...	120	33

These figures need no comment.

If we now compare these figures with those for New South Wales during the same period, we find—

Year.	Typhoid.	Diphtheria.
1889	209	188
1890	148	149
1891	109	179
1892	80	120
1893	74	128

It will be seen that typhoid fever has decreased, but not in anything like the proportion that it has in Melbourne. In fact, the decrease is entirely due to the extension of the sewerage system in the suburban districts. For diphtheria the decrease is very slight; the difference between the figures for Sydney and Melbourne being most marked.

What, then, is necessary to free our colony from these terrible scourges? A comprehensive Public Health Act, providing for compulsory notification of all cases of infectious diseases, such as diphtheria, scarlet fever, measles, typhoid fever, puerperal fever, and whooping cough. Power must be given to isolate the subjects of these diseases, to inspect premises, food and domestic animals, and to destroy old or infected buildings which have become a source of danger to the community. The Board of Health must have increased powers given to it, and direct communication must be established between it and the various departments dealing with the public health, such as the Registrar-General's and the Government Statistician's Departments, the Board of Water Supply and Sewerage, &c. Medical Officers of Health for various districts must be appointed, with power to inspect and report to the Chief Inspector of the Board of Health. A Fever Hospital, containing observation wards, must be erected at a convenient spot close to Sydney. But what is required most of all is the sanitary education of the masses, and the co-operation of the individual members of the community. The public must be made to understand that their lives depend, to a great extent, upon the actions of one another, and that the causes of preventable diseases are, as Sir John Simon points out, local conditions of filth and nuisance polluting air and water, and reckless dissemination of contagion.

REVIEW.

ENLARGEMENT OF THE PROSTATE: By C. W. Mansell Moullin, M.A., M.D., Oxon., F.R.C.S., Surgeon to, and Lecturer on Physiology at, the London Hospital, late Hunterian Professor at the Royal College of Surgeons, London. H. K. Lewis, 136 Gower-street, W.C. 1894.

PROBABLY one of the most useful monographs on a branch of genito-urinary surgery that has ever been published. The author points out in his preface that two years ago he stated that there had been but little progress in the treatment of enlarged prostate, and that now much has been accomplished, new methods having been devised, and operation, with a view to permanent cure, being of frequent occurrence. The old view as to the purely sexual character of the prostate, which the author always supported strongly, has now been adopted, "and this, in its turn, has led to other discoveries, and now it is not too much to say that perfect relief can be assured, even in the most advanced stages of the disorder." The first chapter deals with the normal structure and function of the prostate, which latter is "entirely sexual," as "amply proved by embryology and comparative anatomy, and is established beyond doubt by experiment." If castration is performed early in life, neither the glandular nor the muscular part of the prostate is developed. If later,

the prostate atrophies, and nothing is left but a small and hard fibrous nodule. In neither case is micturition interfered with in any way. The chapter is of the greatest interest, as it leads up to the causes, histology, and the modern treatment of this, up till recently, most intractable affection. The enlargement is not inflammatory, "nor mere hypertrophy, compensatory or otherwise. It is essentially a fibro-adenomatous growth resembling in some measure the normal structure of the gland, extending upwards in the mucous and sub-mucous coats of the urethra and bladder." Space will not allow of too copious extracts; the work must be read to be thoroughly appreciated, and it is one that ought to be in the hands of every surgeon or general practitioner. The causes of the enlargement are fully entered into; then come the effects upon the bladder and kidneys, and the symptoms, which are discussed in the order of their occurrence. Chapter VI. is very well written; here is an extract:—"The symptoms that attract the patient's attention are nearly always due to vascular congestion and chronic inflammation; he seldom applies for relief on account of growth alone. Time soon tells. Congestion, if the cause is removed, begins to subside at once. Thrombosis, which, judging from the chains of phleboliths so frequently found in the prostatic plexus of old men, must be of common occurrence, takes a little longer. . . . In a few days, if thorough rest is enjoined, the thrombi disappear. . . . The exudation around the vessels becomes absorbed. The increase that is due to growth, on the other hand, remains permanent." Then follow a series of classical instructions as to measurements of the prostatic enlargement, the urethra and bladder, and the amount of residual urine, to which the author attaches great importance, and other phenomena associated with enlargement of the prostate.

No less than five chapters are devoted to treatment. The general treatment is admirably laid down; drugs play but a minor part therein, except in the marked influence they have upon the urine. Then follows a valuable chapter on the local treatment, chiefly palliative, and the system of catheterisation that is to commence the "catheter-life" of a patient, as well as preventive treatment. Chap. IX. deals with cystitis and other complications, including retention of urine. If a catheter cannot be passed, an opening must be made in the bladder. The choice lies between the supra-pubic and the perineal routes. Rectal tapping through the prostate (and in these cases it is neither easy nor safe to go about it) does not present any advantage over other methods, and cannot be used for drainage should this be thought desirable. Aspiration supra pubes is not recommended, being only a temporary expedient. It is news indeed to hear that in hæmaturia "the best hæmostatic is chloride of calcium given in 15-grain doses, *twice*, with an interval of three hours." I have tried this in two cases of renal hæmaturia. In one the bleeding stopped after the second dose." The radical treatment comprises a critical analysis of all the rectal, urethral, perineal and supra-pubic operations of the day, and McGill's operation of supra-pubic prostatectomy seems to be the one *par excellence*, although "the combined method" of Nicoll is commendable. That "removal of the testes is followed in a large proportion of cases, if not all, by complete and rapid absorption of the enlarged prostate. This has now been proved conclusively. The gland entirely disappears; nothing is left but a little fibrous mass," will come as a thunderbolt out of the blue to those who have not given the subject much attention. It is here laid down as one of the best lines of treatment ever devised, the testes being of no further use in the economy of an

old man with an enlarged prostate. "Whether it will succeed in all forms of enlargement alike cannot be answered yet, but there is no evidence to the contrary. It has succeeded in all in which it has been tried." Thus the author. From the arguments he has here adduced, we should have no hesitation in recommending suitable cases to submit to this operation without delay. "The risk to life is slight. The absorption is complete. The recovery of power in all cases hitherto has been as perfect as after any form of prostatectomy. The alternative—for, of course, it would not be proposed in any of the early stages of the disease—is certain death at no distant period, by a slow but fatal form of torture." There is so much of interest in this book that we cannot possibly reproduce it all; it must be read in the original.

LETTERS TO THE EDITOR.

THE N.S.W. EDITORSHIP OF THE "GAZETTE."

(To the Editor of *The Australasian Medical Gazette*.)

SIR,—It is due to all members of the N. S. Wales Branch, and especially to those gentlemen who, at the ballot recently taken, were good enough to record their votes in my favour, that I should set forth more clearly than was possible during the lengthy annual meeting of the Branch, the reasons which compelled me to take the course of resigning the position to which I was by their suffrages appointed.

In the remarks I had an opportunity of making at that meeting, I stated as clearly as I was able the considerations on which I had permitted myself to be nominated for that position, the gist of which was that, though laying no claim to literary ability or experience, owing to my having held the office of secretary of the Branch during the past year, and having, therefore, conducted the correspondence with the sister Branches, which resulted in the acceptance by them of the *Gazette* as a federal journal, was in possession of information which would probably be of considerable service in maintaining satisfactory relations with those Branches during the ensuing year.

Dr. Knaggs having been nominated also for the position, the ballot was entered upon, with, I believe, no other feeling upon the part of either of us than a desire to ascertain the course of action which would meet the wishes of the majority of members, and so best serve the interests of the Branch, to which I have every reason to believe Dr. Knaggs feels himself as much bound as I do myself. Very early, however, in the week which was occupied in taking of the ballot, circumstances came to my knowledge, which made it abundantly clear to me that considerable feeling existed as to the appointment.

It was, for example, stated that one of my nominators had been induced to nominate me under false pretences; and *apropos* of this statement, two prominent members—both my personal friends and men whom I hold in the highest respect—had a sharp difference, of a kind so painful to me as to lead me almost to withdraw my name, as I should undoubtedly have done at that stage had I not felt bound to those who had nominated me. Furthermore, I was informed by the President that it had reached his ears that some thirty members of the Branch would resign should I be appointed. I need hardly say that foolish threats of this character—though I have no doubt as to the fact of their having been uttered by certain members who permitted their judgment to be overwhelmed by their strong feelings—had no weight with

me, nor indeed are worthy of being noted, save as an evidence of the high degree of tension which had arisen during the progress of the ballot.

However, on the Wednesday evening preceding the annual meeting—that is to say, 48 hours before that meeting—circumstances arose which forced me to seriously consider my position in the matter. At the close of the meeting of the Medical Defence Union, held on that evening, I was spoken to by the President (Dr. Crago) and by Dr. Fiaschi, who both expressed the opinion—the former having nominated Dr. Knaggs, and the latter as one of my nominators—that in the interests of the Branch and of the *Gazette* a joint editorship by Dr. Knaggs and myself should, if possible, be arranged. Expressions of opinion of a similar intent were at the same time conveyed to me from other of my nominators and supporters. Dr. Manning, Dr. Chisholm, Dr. Sydney Jones and many others were also mentioned as having expressed like views. Both those who had supported Dr. Knaggs on the one hand, and myself on the other, were said to be desirous of such an arrangement being made. There was, in addition, a sort of informal conference among many members who had been present at the meeting alluded to, and, as far as I was able to gather, with a like result. And finally an intimation reached me from Dr. Knaggs that he also agreed with the joint editorship.

I now felt my position to be considerably altered by what had thus transpired. No man of common sense could have hoped for anything like unanimity on such a question as this election of editor, and no ordinary degree of opposition, nor even of hostility, would have justified me in shirking a responsibility, however irksome, which in the opinion of many members logically devolved upon me from my past actions and attitude with respect to the acquisition of the *Gazette* by the Branch. Nor would the vain threats to which I have alluded have for a moment deterred me; but I confess I was profoundly influenced on finding that men who were my supporters—my nominators even—held the view that I should accept, should the opportunity be given, an arrangement which I strongly felt would not work satisfactorily, and in my opinion must sooner or later end disastrously for the Branch, for the *Gazette*, and for the editors concerned. Moreover, the opinion as to the unsatisfactory nature of a divided responsibility I knew to be shared by some, if not by all of those gentlemen who, as a matter of expediency, and in perfect good faith, made the proposition on this occasion. I asked until the morrow to consider the position, and having given the matter my most earnest consideration, I determined that since I found myself unable to accede to the suggestion of my supporters as to a dual editorship, I should ask the consent of my nominators to retire, with the view of joining all our forces in cordial support of Dr. Knaggs, as the best available solution of the difficulty. Accordingly, on Thursday and Friday I was occupied in seeing those of my nominators and supporters who had taken the most active part in the affair; and having gained their consent, I saw Dr. Knaggs at half-past five on Friday evening (the evening of the annual meeting), and informed him of my intention. Dr. Knaggs, having the assurance of support, as far as it was possible to give it, of all concerned, agreed to accept the position should he be elected.

Such, briefly, is an account of the circumstances which led me to retire from the post to which the Branch did me the honour to elect me—a post from which I retired, not, I hope, for want of courage to face its difficulties; not from any desire to shirk its responsibilities, but because I felt, and still

feel, that by so doing I was, under the circumstances, acting in the best interests of an institution to which I am entirely devoted, and to whose future I look with the utmost confidence as an influence for good amongst us as a profession.

In a period of excitement, such as the week of the ballot proved to be, things no doubt were said and done which had better have been left undone, and which, being done, were better forgotten—as for the most part they surely will be. It remained, however, for one to whom, from his previous association with the Branch as councillor, as secretary, as president, we had a right to expect better things—to make in a carefully-prepared and deliberately-read speech an insinuation so offensive and uncalled-for, that one cannot injure members by supposing that it found amongst them one single sympathiser. Dr. Scot Skirving's statement that it was a "distinct impropriety" for the ballot-papers for the editorship to be sent in a sealed envelope to the hon. secretary, because that officer chanced to be a nominee for the post, contained, notwithstanding Dr. Skirving's thrice significantly-reiterated disclaimer that "he made no accusation," an insinuation of the grossest sort. The custom of the Branch from the beginning has been for all ballot-papers to be returned to the hon. secretary, without any provision for their being handed by him unopened to the chairman of the meeting. Such was the practice during Dr. Skirving's tenure of office as secretary, on occasions when not once or twice he was himself a candidate for office as a councillor. It has been the desire of the Council during the past year to have all such matters conducted in more orderly fashion; and as the result of a conference between the President and myself, at which I expressed my feeling that under no circumstances would I have the ballot-papers for the editorship returned to me open, it was arranged that all ballot-papers should be returned in specially marked envelopes to the hon. secretary, to be delivered unopened by him to the chairman of the Council meeting. This course was, therefore, for the first time in the history of the Branch, strictly carried out, and it was under such circumstances that Dr. Skirving thought it fitting to make the insinuation to which I have referred.

For Dr. Skirving's innuendo, as far as it concerns myself, I can afford to remain silent, but as an example of the intensity of the feeling aroused in some minds by this matter, and as a further justification, were any needed, of the course I have taken, it is valuable. Members generally will however, no doubt, resent the imputation that the *morale* of the profession amongst us is at so low an ebb that methods of conducting business, recognised as proper and ordinary in all cognate bodies, are to be regarded as "improprieties" when followed by the New South Wales Branch of the British Medical Association.

I am, faithfully yours,
L. RALSTON HUXTABLE.

THE "GAZETTE" FUND.

(To the Editors of the A. M. Gazette.)

SIRS,—For the sake of correctness, I wish to mention that the £1 credited as my contribution to the *Gazette* Fund was merely one year's subscription to that journal (transmitted to the Funds), the cheque being written before the change of proprietorship was completed.

Yours faithfully,

B. SCHWARZBACH.

28 College-street, Sydney, March 29.

THE OFFICERS OF THE NEW SOUTH WALES BRANCH B. M. ASSOCIATION FOR 1895.

(To the Editor of *The Australasian Medical Gazette*.)

SIR,—It is worthy of notice that for the year 1895—which, perhaps, in the future may be referred to as the first of a new epoch for the profession in Australasia—the President, Vice-President, Editor, and Honorary Secretary of the New South Wales Branch of the British Medical Association are Australasians.

Such a coincidence at this juncture must cause us to pause and think upon the future. The gentlemen referred to are European graduates, but the time must certainly arrive when the profession in these colonies will be in the hands of our own graduates. There can be no doubt but that our own graduates will maintain in every way the best traditions of our profession.

In these days, however, of great changes we should make sure that our graduates, from whatever colony they may hail—a rich colony or a poor one—are provided with the means calculated to attract to them the greatest possible amount of respect from the rest of the world, and with means to secure the widest possible scope for usefulness.

To effect these objects, our policy should be shaped, and, amongst other matters, it seems to me that we should strive after the following:—

1. The establishment of one great federal non-teaching University, for the purpose of fixing curricula, examining, and conferring degrees; in short, a "University of Australasia," instead of several Universities, (with a possibility of a multiplication of these institutions, as in America), each granting degrees.
2. A good Federal Medical Act.
3. The formation of a great Australasian Medical Association from the colonial branches of the British Medical Association, and still affiliated to the parent association.
4. The encouragement of all efforts towards developing a distinctively Australasian medical literature and medical spirit.

I am, yours, &c.,
AUSTRALASIAN.

HYDATIDS.

(To the Editors of the *Australasian Medical Gazette*.)

SIRS,—Dr. Poulton's remarks on Mr. Fitzpatrick's "Notes on some Hydatid Cases," call for comment, were it only on account of the captious and hypercritical spirit they reveal. Some of Dr. Poulton's statements and deductions are entirely wrong. For example: he says that the incision in Case No. 6 "divided an intercostal artery," and that this is "inexplicable." It is, I agree; but Mr. Fitzpatrick's words are, "a branch of an intercostal artery." A very different thing, I venture to think.

Again, Dr. Poulton regards it as "inexplicable" that an incision under the ribs down to an abdominal cyst should avoid the peritoneum. Physiologically, yes; pathologically, no! The cyst wall and peritoneum were adherent—more than adherent—incorporated, evidently. Peritoneum over the attached area had merged into cyst-wall, and had ceased to exist as peritoneum. Hence, the operator was enabled to incise the cyst without opening the peritoneal cavity.

In Case No. 6, where it is stated that a brain-cyst, emptied of its contents, did not collapse on being emptied, and was extracted almost intact through a small opening the size of a shilling. Dr. Poulton

actually pictures the cyst being extracted, *uncollapsed*, through this opening. He is filled with amazement at this piece of surgical jugglery. Mr. Fitzpatrick—the careful reader of his notes will observe—simply says the cyst did not collapse when emptied. He does not say, and I fancy neither rack nor thumbscrew would make him say, that it did not collapse during extraction.

Doubtless, the manner in which so large a cyst was got through so small an opening with little injury, was by seizing the end—it was elongated—with broad forceps, twisting it, rope-fashion, and then using gentle traction.

It is too evident that in the "Notes" the term "prone" has been accidentally used for "supine." Does Dr. Poulton actually conceive that mesial abdominal incisions were made with the patient lying on his belly? Or is such crass "denseness" assumed for the sake of flinging idle criticism? The latter, I hope—charitably.

Dr. Poulton's craving for technical details amounts to a disease, and the Sisyphean task of satisfying him in this line it were folly to attempt, even presuming, which is absurd, that an editor would grant the space.

I am, sirs, yours truly,

ALTRUIST.

ETHER ANÆSTHESIA AND ITS ADVANTAGES.

(To the Editors of The Australasian Medical Gazette.)

SIRS,—In the last issue of the *Australasian Medical Gazette*, I have read with considerable interest the article by Dr. Colpe on "The Ether Anæsthesia and its Advantages, especially for Isolated Practitioners."

Having for the past few years been practising where the nearest medical man lived sixty-five miles away, I frequently had to give the anæsthetic and do the operation myself without any skilled assistance, and I always used ether (when not contra-indicated). The inhaler I prefer is Clover's (not mentioned by Dr. Colpe), which requires the whole attention of the administrator; nor do I count this a disadvantage, but consider that, with the administration of any anæsthetic, the patient should have the undivided attention of the person giving it. With Clover's inhaler I find that, having myself put the patient thoroughly under, I can then turn the indicator back to 2, and hand it to my assistant (at the same time instructing him to take it off occasionally to admit air), and I know that the patient will remain under its influence, whereas with chloroform the lay assistant will generally either give too much, or, more frequently, too little, and allow the patient to come round before the operation is over.

I quite agree with Dr. Colpe that for the isolated practitioner we have in ether a more suitable anæsthetic than chloroform, and my experience has taught me that in operating single-handed, one is relieved of half the anxiety.

I am, Sirs, yours truly,

J. B. MCILROY, M.R.C.S. Eng., L.R.C.P. Lond.
Annandale, Sydney, March 26, 1895.

MR. J. C. LANGLEY (Burroughs, Wellcome and Co.) informs us that his firm have received a special award at the Hobart Exhibition for their "Tabloids of Compressed Tea."

ADVERTISEMENT, with many years experience in leading London Hospital, seeks engagement as NURSE OR VALET TO INVALID; travel or otherwise; good references. Address GEORGE DOWNER, G.P.O., Sydney.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during February to every 1,000 of the population was 2·31, and of deaths 0·93; 60 deaths, or nearly 20 per cent. of the total deaths occurred in public institutions. The deaths of children under five years of age during the month were 157, or 39·65 per cent. of the total, 108 (27·27 per cent.) being under the age of one year. Four deaths of child-bearing women took place during the month, or one death of a woman to every 245 births recorded.

THE second reading of the Medical Practitioners Bill was carried in the Assembly on March 22nd by fifty-two votes to fourteen, the minority consisting mostly of labour members. During the debate Sir George Dibbs stated that one of the many irregular practitioners in Sydney, who had been a boatswain, boasted to him that he had made a fortune of £150,000 by the practice of medicine, and that it had cost him from £1,700 to £2,000 a year in fighting this bill.

THE action, *Cunneen v. Dr. Cooper*, of Tamworth, was decided on the 14th March, after two and a half days' trial. The medical witness for the plaintiff was Dr. Pratt, of Tamworth; and for the defendant, Drs. M'Cormick, Sydney Jones, Knaggs and Sydney Jamieson. The jury gave a verdict for the plaintiff, damages £200. Dr. Cooper has lodged notice of appeal, so the matter is still *sub judice*.

DR. F. A. BENNET, of College-street, Sydney, has been appointed Physician to the Department for Diseases of the Skin at the Sydney Hospital.

DR. E. H. BINNEY has been elected Senior Resident Medical Officer of the Sydney Hospital, and Drs. R. S. McKinnon, M. Veech, G. F. Rutter and E. J. Spark have been elected Junior Resident Medical Officers.

DR. A. J. BRADY, of Lyons' Terrace, Sydney, left by the R.M.S. "Oceana" on a six months' trip to Europe.

DR. P. D. BRAY, late of Carisbrook and Corryong (Vic.), has commenced practice in Sydney.

DR. CALDER, of Forbes, has left on a trip to England. During his absence his practice will be carried on by Dr. C. Swanston, of Sydney.

DR. L. G. DAVIDSON, late of Goulburn, has started practice at 376 Pitt-street, Sydney, the late residence of Dr. M'Culloch.

DR. W. S. DOBBIN, late of Castlemaine (Vic.), has commenced practice at Deniliquin.

DR. R. M. KINROSS, late of the Sydney Hospital for Sick Children, has commenced practice at Inverell, in conjunction with Dr. Morton.

DR. G. L. L. LAWSON has removed from Sydney to Goulburn.

THE Hon. Dr. MacLaurin, M.L.C., of Sydney, has been elected Vice-Chancellor of the Sydney University.

DR. COSBY MORGAN, of Sydney, and late of Wagga, has succeeded to Dr. L. G. Davidson's nucleus at Goulburn.

DR. A. W. NASH has left Robertson for Wallaseid.

DR. VENTRY SMITH, formerly of Burrowa and Murrumburrah, has succeeded to Dr. J. Houston's practice at Grafton.

DR. E. S. STOKES, late of Port Macquarie, has commenced practice at Murrumburrah.

A SERIOUS accident occurred to Dr. Morgan O'Connor, of Wagga, at the Hibernian ball on March 18th. When taking part in the opening quadrille, he slipped and fell heavily, sustaining fracture of the left thigh at the hip joint.

DR. R. H. RITCHIE, a Melbourne graduate, has commenced practice at Bega.

DR. H. W. S. VERITY, formerly of Cheltenham (Vic.), has commenced practice at Brewarrina.

NEW ZEALAND.

THE proportion of deaths registered during February to every 1,000 of the population was 1.03 for Auckland and suburbs, 0.88 for Wellington with suburbs, 1.04 for Christchurch and suburbs, and 0.49 for Dunedin and suburbs. The total births in these four boroughs during February amounted to 400, against 422 in January. The deaths in February were 146, to which males contributed 69, and females 77. Sixty-nine of the deaths were of children under 5 years of age, being 47.26 per cent. of the whole number; 57 of these were under 1 year of age.

THE death-rate of Auckland and suburbs during 1894 was 14.11 per 1,000 of the population; for Wellington and suburbs, 11.43; for Christchurch and suburbs, 10.19; and for Dunedin and suburbs, 10.18.

A NEW hospital and a detached doctor's residence are now being erected at Frankton, near Lake Wakatipu, at a cost of £1,150, in the place of the buildings recently destroyed by fire. The idea of having the new hospital at Queenstown has been abandoned.

DR. HENRY WIDERNHAM MAUNSELL, M.R.C.S., Eng., M.B. Dub. 1867, M.D. 1875, formerly of Dunedin, died at South Kensington, London, on the 21st February, in his fiftieth year. The deceased gentleman was a native of Ireland, and left for Melbourne in 1867, when he was appointed house-surgeon of the Melbourne Hospital, retaining the position for three years. In 1870 he went to New Zealand, and took charge of the hospital at Hokitika, holding the post for two years. He then entered upon private practice, and in 1876 he removed to Dunedin, where for many years he was a member of the honorary medical staff of the Dunedin Hospital, and he also held the position of Lecturer on Surgery at the Otago University for two years. He left Dunedin for London, in consequence of ill-health, in 1891, with the intention of returning to New Zealand. Dr. Maunsell had the reputation of being the most successful surgeon in New Zealand.

JOHN MOORE TWEED, L.R.C.P. et R.C.S. Edin. 1880, who came to the colony in 1883, died at his residence at Ashburton on the 24th February, aged 37 years.

DR. C. M. ANDERSON, of Sydenham (Christchurch), and Dr. E. Jennings, of Christchurch, have resigned their commissions as surgeons of the New Zealand Volunteer Force.

DR. GRAHAM CAMPBELL has commenced practice at Cathedral Square, Christchurch.

DR. J. F. CAROLAN has removed from Pukekohe to Papakura.

DR. J. M'N. CHRISTIE has commenced practice at New Plymouth.

DR. GRAY HASSELL, Medical Superintendent of the Sunnyside Lunatic Asylum at Christchurch, has been re-transferred to Auckland.

DR. WALTER HISLOP, late of Palmerston South, has succeeded to Dr. Whitehead's practice at Petone, near Wellington.

DR. E. G. LEVINGE has returned from his trip to England, and resumed duties as Medical Superintendent of the Sunnyside Lunatic Asylum at Christchurch.

DR. T. H. LEWIS has been appointed Health Officer at Auckland, in the place of Dr. J. H. Hooper.

DR. R. S. STEPHENSON, late of the Melbourne Homœopathic Hospital, has commenced practice at Dunedin.

QUEENSLAND.

MEDICAL men in Queensland, having cases of diphtheria under their charge, may obtain antitoxin from Dr. Wilton Love, in Brisbane, the Secretary of the Queensland Central Board of Health, to whom it has been entrusted for distribution by the Colonial Secretary, who, on behalf of the Government, has arranged for a regular supply of diphtheria antitoxin from the British Institute for Preventive Medicine.

A BOY, aged 11, attending the Central School, in Brisbane, has been found to be suffering from leprosy. He was removed to the lazaret at Dunwich. His parents are both Europeans, and the boy has always lived in Brisbane. There are now four white lepers at Dunwich.

AT a recent meeting of the Queensland Central Board of Health, the question of leprosy in Australia was discussed, and it was decided to ask the Government to have periodical examinations made of the coloured races and of their habitations.

DR. C. E. DUMBLETON, of St. Helen's (Tasmania), has succeeded to Dr. Byrne's practice at Dalby. Dr. Dumbleton has also been appointed surgeon to the local hospital.

DR. J. LOCKHART GIBSON, of Brisbane, will in future confine his practice to affections of the eye, ear, throat and nose (in their widest sense), and will decline the limited amount of general consulting work which he has undertaken for the last few years.

DR. J. LOCKHART GIBSON has been appointed Hon. Ophthalmic Surgeon to the Brisbane Hospital for Sick Children, in addition to his appointment for the Ear, Throat and Nose.

DR. G. KNOWLES, of Georgetown, suffered an injury to his collar-bone, by a fall from a horse.

DR. HY. L'ESTRANGE has removed from Roma to St. George.

DR. F. PAIN, of Allora, and Dr. J. Lauterer, of South Brisbane, have been made Justices of the Peace for the colony.

DR. E. G. K. MARKS has removed from Roma to Aramac, where he has been appointed surgeon of the local hospital, in the place of Dr. Reid, resigned.

DR. M. A. REID has left Aramac for Melbourne.

DR. RENDLE, of Brisbane, and his family, left for Europe by the R.M.S. "Ophir."

DR. A. J. TURNER has returned to Brisbane from a twelve months' trip to Europe.

SOUTH AUSTRALIA.

THE newly-erected James Brown Home for Chest Diseases at Belair, near Adelaide, is now open for the reception of patients.

DR. J. B. GUNSON, late of the Adelaide Hospital, has left for England.

DR. A. W. HILL, formerly of Terowie, has returned from his trip to England. Dr. Hill intends to settle in the neighbourhood of Adelaide.

DR. F. D. JERMYN, late of Koroit (Vic.), has succeeded to Dr. A. W. Powell's practice at Mount Gambier.

DR. J. S. PROCTOR has commenced practice at Happy Valley.

TASMANIA.

DR. R. WILLMOT, late of Violet Town (Vic.), is now residing at Hobart.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during February to every 1,000 of the population was 2.14, and of deaths 1.26. Males contributed 56 per cent. and females 44 per cent. to the mortality of the month. Children under five years of age contributed 40 per cent. to that mortality, as against 40 per cent. in February, 1894. One hundred and twenty deaths, or 22 per cent. of the whole, took place in public institutions.

THE Hon. Mr. Turner, Premier of Victoria, has addressed a circular letter to the Premiers of the other colonies, suggesting that steps should be taken to erect federal quarantine stations at Albany and Cooktown, and that the colonies should share in the cost of building the stations, and come to an arrangement by which each colony would contribute its fair share towards the cost of their maintenance.

A SIX weeks post-graduate course of bacteriology is now being held in the pathological laboratory of the Melbourne University. The course is open to all graduates of the University and other members of the medical profession. The first meeting of the class was held on the 5th April. Fee for the course, £2 2s.

DR. C. J. MARTIN, Demonstrator of Physiology at the Sydney University, will most likely be appointed Professor of Physiology at the Melbourne University, in the place of Professor Halford, who will shortly retire.

AN old lady of English birth was cremated on the shore of Hobson's Bay, near Sandringham, on February 20. This is the first time that a European has been cremated in Australia.

MR. J. W. SINGLETON, of Fitzroy, who describes himself as a "psychopathist," or magnetic healer, sued a patient in the Melbourne County Court for £56 14s. "for communicating to the patient some of his own vitality by laying his hands upon the affected part." The judge held that the plaintiff was not entitled to sue for his services, and nonsuited him, with costs.

DR. A. O. BOBARDT, formerly resident medical officer at the Melbourne Hospital, has been appointed surgeon of H.M.S. "Dart," surveying vessel on the Australian station.

DR. J. W. DOW, late of Clunes, has been appointed medical officer to the friendly societies at Carisbrook, in the place of Dr. Bray, who has left for Sydney. There were eleven applicants for the position.

DR. A. G. SALTER has been appointed resident medical officer at the midwifery department of the Melbourne Women's Hospital. The other candidates were: Miss Lilian Alexander, M.B., Mr. A. C. F. Halford, M.B., Mr. A. W. Connelly, M.B., and Mr. W. B. Vance, M.B. Mr. Salter was elected, after a close contest with Miss Alexander, the voting being nine against eight.

DR. E. R. SAWREY, of the Melbourne Women's Hospital, has been appointed acting resident surgeon at the Geelong Hospital, to act for Dr. Kennedy, who has left for England on an eight months' trip.

WESTERN AUSTRALIA.

DR. S. B. DAVIS has been appointed a member of the Beverley District Board of Education.

SAMOA.

DR. S. H. DAVIES, medical missionary on Savaii Island, left for England, via Sydney, by the R. M. S. "Austral."

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Crisp, Thomas, M.B. Univ. Lond. 1881; L.S.A. Lond. 1879; M.R.C.S. Eng. 1879.
Dobbin, William Sinclair, M.B. Univ. Dub. 1886; B. Ch. Univ. Dub. 1886; F.R.C.S. Irel. 1884.
Dombrain, Ernest Arthur, M.B. Univ. Melb. 1894.
Ward, William Alfred, M.R.C.S. Eng. 1893; L.R.C.P. Lond., 1893.

NEW ZEALAND.

Campbell, Graham, M.B., M.S. Edin. 1886.
Christie, Joseph MacNaughton, M.B., O.M. Glas. L. Mid. Rot. Hosp. Dublin.
Stephenson, Ralph Stuart, M.B. et Ch. M. Ed. 1890.
Faulke, Herbert Charles, F.R.C.S. Ed., L.R.C.P. Ed., L.F. P.S. Glas.

TASMANIA.

Willmot, Robert, F.R.C.S., Edin., 1883; M.R.C.S. Eng., 1868; L.S.A., Lond., 1868.

VICTORIA.

Forsyth, William Alexander, M.B. Melb. 1895.
Green, Thomas Ernest, M.B. Melb. 1895.
Ritohie, Robert Henry, M.B. Melb. 1894.
Salter, Alexander George, M.B. Melb. 1895.
Owens, Edward Matthews, M.R.C.S. Eng. et L.S.A. Lond. 1866; L.R.C.P. Edin. 1868.

MEDICAL APPOINTMENTS.

Forbes, Francis Courtenay Sutherland, M.B. M.S. Aber., to be Public Vaccinator for Obinamaru, N.Z.
Lewers, Richardson Wakefield, M.B. Ch. B. Melb., to be an additional Public Vaccinator for the district of Foxton, N.Z.
Powell, Henry Arthur, M.B., Ch. B., to be a Public Vaccinator in South Australia.
Shields, Charles James, M.B., B.S. Melb., to be Public Vaccinator for the district of Hyde, N.Z.
Stanton, Thomas, L.R.C.S., to be Public Vaccinator at Koroit, Victoria.
Yeates, Edward, F.R.C.S., to be a Public Vaccinator at Learmonth, Victoria.

Various papers on Anti-toxin and other matter had to be kept over from extreme pressure on our space.

REPORTED MORTALITY FOR THE MONTH OF FEBRUARY, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	111,244	230	128	49	...	1	...	...	...	12	16	11	11	3	...	1
Suburbs	275,615	748	268	108	...	...	6	...	11	22	20	9	20	9	3	3
NEW ZEALAND.																	
Auckland & suburbs..	42,545	106	44	25	...	...	...	...	3	11	3	2	1	...	...	...
Christchurch ..	41,590	89	44	21	...	...	...	...	1	8	2	...	5	2	...	...
Dunedin ..	48,476	96	24	5	...	...	...	...	1	2	2	...	2	4	...	...
Wellington ..	38,298	109	34	18	...	...	1	...	...	3	3	1	4	...	...	1
QUEENSLAND.																	
Brisbane	56,075	...	...	...	}	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582
SOUTH AUSTRALIA	345,888	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	59,749	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																	
Hobart	35,051	80	43	12	...	...	1	...	4	6	4	...	...	3	...	...
Launceston	22,674	46	24	8	...	...	...	...	1	2	1	...	...	4	...	...
Country Districts	98,484	208	60	...	2	...	4	1	1	4	...	...	...	...	...	1
VICTORIA.																	
Melbourne	64,171	98	58	220	...	2	8	2	30	16	59	28	35	26	4	6	
Suburbs	380,661	843	493	
Ballarat and Suburbs
WESTERN AUSTRALIA*	82,072																

* For the quarter ending.

METEOROLOGICAL OBSERVATIONS FOR FEBRUARY, 1895.

STATIONS	THERMOMETER.				Mean Height of Barometer.	RAIN.		Mean Humidity.	Prevailing Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.		Depth.	Days.		
						Inches			
Adelaide—Lat. 34° 55' 33" S.; Long. 138° 36' E.
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.	85	67.8	55.5	...	2.30	9	81	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.	86	62.5	38.6	...	1.32	5	65	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.	83	58.8	42	...	4.00	7	71	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.	95	...	48	29.967	.61	6	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.	91.5	...	46.6	30.006	.23	3	...	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.	100.6	69.8	50.3	29.882	.74	5	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.	90.2	70.4	60.8	30.040	6.66	21	78	...
Wellington—Lat. 41° 16' 28" S.; Long. 174° 47' 25" E.	88.0	63.5	49.8	...	5.32	10	69	...

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

AMBULATORY TREATMENT OF FRACTURED LEGS.

By O. BLOCH, M.D., ALBURY, N.S.W.

It can scarcely be denied that the usual way of treating fractured legs with padded splints, or padded hardening encasements (plaster-of-paris, poroplastic felt, guttapercha, etc.), with or without the application of extension or elevation, and the enforcement of strict rest in bed on the patient, is far from giving satisfaction. Not only does the acting surgeon—(though the setting of the fragments may have been perfect, and the application of the bandages carried out with all precaution possible, and according to the most approved rules of the school)—occasionally find, to his dismay, when removing the bandages, that the bone-ends have shifted—displacements, shortening, or even false joints being the result; but even if everything is proceeding satisfactorily, and a good result is finally obtained, the patient has been subjected to the great discomfort of being confined to bed, though otherwise quite healthy, perhaps for months, and the joints are stiff and unfit for movement for a long time afterwards. A frail constitution may even, quite apart from the injury itself, be seriously impaired by the long confinement to bed and want of exercise and fresh air, while it is well known that in aged people hypostasis of the lungs, arising from the enforced recumbent position, may produce the most fatal result, or prevent the knitting of an otherwise not very serious fracture. It is true that these failures are the exception; but the exceptions are quite frequent enough to cause the medical attendant a certain uneasiness when, in more serious cases, he sees the fatal spot disappearing from view under a voluminous cover, not knowing whether he will find the fragments in the carefully-arranged position he has endeavoured to keep them in during the tedious work of bandaging, when he removes the bandages for inspection.

In the Charité Hospital at Berlin there has been practised for some years a new treatment for fractured legs, which, from the results published, bids fair to do away with most of the disadvantages enumerated above, and to place this branch of surgical handicraft on a safer and more satisfactory footing.* As I had an opportunity

* KRAUSE.—"Beiträge zur Behandlung der Knochenbrüche der unteren Gliedmassen im Umhergehen."—*Deutsche Med. Wochenschrift*, 1891, p. 457. KORSCH.—"Über den ambulatoischen Verband bei Knochenbrüchen des Unterrund Oberschenkels, sowie bei complirter Brüchen."—*Berl. Klin. Wochenschrift*, 1893, 9th January.

of trying the method in a rather serious case, (described below) with good results, I feel justified in recommending it to the profession for further trial.

This method consists, briefly, in *encasing the limb in plaster-of-paris bandages applied to the bare skin, slightly greased with olive oil, and allowing the patient to use the member while the process of knitting is going on.* Both deviations from the usual plaster-of-paris treatment—the application of it without padding and the walking about of the patient—are, I confess, startling at first sight. To the former, the objection will be raised that a tender skin would be irritated by the prolonged touch of the plaster, and that the pressure on the prominent bones (ankle and tibial condyles) would cause abrasions, sores, and even gangrene of the skin. The premature use of the limb seems even to strictly contradict the requirements of that absolute rest of the leg which has so long been considered as indispensable for the knitting of the fragments. I propose to show, on theoretical reasons and from practical experience, that these objections are not only unfounded, but that the above-mentioned method is perfectly rational, and adapted to secure the main point of healing a fracture, viz.: *maintenance of the proper position of the fragments*, while the absolute rest of the broken limb as a whole is by no means necessary or even desirable, as long as the bone-ends remain undisturbed. The application of plaster-of-paris to the oiled skin has been practised by Von Adelman without injurious effects no less than half a century ago; and the inventor of hardening bandages (Sentin) allowed his patients with fractured legs to walk about—not, it is true, using the injured member, but having it suspended by a strap slung round the neck. Both facts have since fallen into oblivion, the accuracy required for the application of plaster-of-paris bandages to the bare skin very likely preventing it from coming into general use. It has been found more convenient to apply the hardening encasements as well as the splints over a thick padding with some soft material as tow, cocoanut fibre, or most generally surgeon's wool, gauze, and soft bandages. But just this padding, on which the student is taught to spend his special care, has the effect to *prevent the fragments from maintaining their position.* Absorbent wool, used for its elasticity, retains this quality only as long as its interstices are filled with air. As soon as it is saturated with perspiration it becomes lumpy and unevenly distributed. Tow and cocoanut fibre, if well teased, so that

the fibres lie all one way, retain their elasticity; but even then, and just because of their elasticity, they yield to the slightest force, and allow the bone-ends to shift at the slightest movement of the limb or the traction of the muscles. Hence the necessity of using constant traction and enforcing absolute rest in the case of padded splints or encasements, and hence the frequent displacement of the fragments if the rest is not scrupulously maintained.

To understand the effect of plaster-of-paris applied to the bare skin, it will be convenient to consider a special case—say, a simple fracture of the tibia in the lower or middle third. The skin is slightly, but thoroughly oiled, which subsequently allows the plaster to come easily off without previously shaving the leg. The fracture is set in the usual way. One assistant executes traction at the middle of the thigh, another counter-traction at the foot, holding it at the toes and the heel at a right angle with the tibia. The knee is slightly bent. The bandage, previously well soaked in hot water containing a little alum or chloride of sodium, is now carried from the toes upwards, crossing over the ankle to the lower third of the thigh, keeping close, but without pressure, to all the mouldings of the leg. *No folds are allowed in the first layer.* The bandage must be cut off whenever the shape of the leg would require a *renversé* in an ordinary bandage. The following layers can be applied quicker and in the usual way, only taking care not to pull the bandage, a few folds or *renversés* doing no harm now. It is not at all necessary to use an excess of bandage or plaster, about six layers being sufficient. For the leg about twenty-five yards of bandage, six inches wide, are required. For the impregnation of a bandage six inches wide, six yards long, about half a pound of plaster-of-paris should be used, so that the weight of the whole case is from two to three pounds. The plaster-of-paris ought to set quickly, and be without any gritty admixtures. It is best to freshly impregnate the bandages (Mousselin), as those obtainable in tins may not be perfectly dry or made of starched bandages, in which case they require a much longer time to set.* The assistants have to keep their places until the case is at least superficially hardened, which should occur in about twenty minutes after application, and the encased limb ought to rest on soft cushions about twenty-four hours, when the plaster will be hard all through.

Supposing, now, the bandage fits well and tightly without pressing, and is perfectly hard, which will be its effect. As the bandage keeps close to all the mouldings of the leg, the bone-

ends cannot shift sideways at all. The hard case itself, by pressing against the back of the foot and the ankle-bones at one end, and to the vault of the tibial condyles at the other, *effectively exercises extension and counter-extension*, and at the same time the pressure is distributed over a sufficiently large area not to cause any excessive local pressure, as long as the innermost layer is smooth and the plaster contains no gritty particles. This is the reason why it is so well borne, even by the most tender skin,† especially if quite a *tiny* pad of wadding be placed on the tips of the ankle-bones and the tibial condyles. So we have the ideal splint—perfect immobility of the bone-ends, extension, and counter-extension. Moreover, if any weight comes to bear on the lower limb, it will be borne from the knee downwards *by the case itself*, without interfering with the spot of fracture, and the patient can confidently put the injured foot to the ground; perhaps on crutches at first, on sticks afterwards. In simple cases the ambulatory bandage can be applied as soon as it is apparent that the swelling will not increase, a preliminary splint bandage being used up to that time. The use of the leg on crutches or a stick can be allowed after the plaster is thoroughly hard (after twelve to twenty-four hours), and from four to eight days will be sufficient to keep the patient in bed. From the cases published, it is to be seen that not only the leg can be used without pain and harm to the knitting, but that the healing process takes, on an average, less time than if the leg is permanently elevated. The reason is plain: By restoring as far as possible the normal conditions of circulation, we influence the formation of a callus beneficially. At the same time, though a certain amount of stiffness in the joints will follow, it is not nearly as great as if the leg is kept absolutely quiet, especially if, as recommended, some massage is carried on when the bandages are changed. A change ought to take place as soon as the case becomes loose from decrease of swelling or loss of flesh, on an average every ten days. It goes without saying that, especially for one or two days after each application, the patient has to be watched, and the bandage removed at once if great pain or discoloration and swelling of the toes indicate an obstruction in the circulation. The removal and displacement of a plaster-of-paris bandage, it is true, is a little more troublesome than that of a splint; but after some practice certainly not very much so; and the great advantage of having the patient walking about, even on crutches, should largely compensate for the additional trouble.

* I was perfectly satisfied with Arnold's make of bandages in tins.
† I applied plaster-of-paris bandages on the bare skin of the fractured thigh of a seven-year-old boy (not ambulatory) for weeks without the slightest sign of discomfort.

Fractures of the malleoli can be treated in the same way, only it must be borne in mind that in these cases the result depends not so much on the fracture itself as on the degree of laceration of the lateral bands. Here the inaugurators of the treatment recommend not to apply the plaster-of-paris before the eighth day, to carefully massage the ankle-joint, and apply warm compresses till the swelling and pain subside, and then to encase the limb up to the knee in extreme varus position of the foot.

Fractures of the thigh can be treated on the same principle. Here the extension is effected by the pressure of the plaster-case against the condyli femoris and tibia, and the ankle on one side, while the counter-extension has to be made by a kind of upholstered iron ring pressing against the tuber ischii (as used in Thomas's splint). Strong lateral iron rods are soldered to the ring and included in the plaster-of-paris. The plaster cannot be applied before the seventh or eighth day, after the force of the ileo-psoas muscle tending to shift the upper fragment forward and inward is overcome in the usual way by elevation and stirrup traction. A great number of cases have been published where patients with badly fractured thighs walked about on sticks after ten days; but as I have not yet had an opportunity of trying this arrangement in a suitable case I will refrain for the present from enlarging on the technique. Recently Professor Bruns has recommended a splint which is constructed on a similar principle, and enables patients with fractured thighs to walk about.*

I have to add a few words as to the compound fractures. Also in these cases the ambulatory treatment has proved perfectly satisfactory, with the understanding that the wounds are rendered thoroughly aseptic previous to the application of the plaster. The leg is shaved, the wounds cleaned antiseptically, splinters removed, sharp edges snipped off, the wound is filled with iodoform gauze covered with a small pad of aseptic gauze or wadding, and the plaster-of-paris applied on the top of it. *The plaster acts itself as an aseptic absorbent cover*, and only if the secretion should be so abundant as to keep the surface moist a change will be required. If the wounds are very large, it may be preferable to wait with the application of the plaster-of-paris until granulation of the wound begins. In any case it ought to be deferred until the second or third day, when it will be apparent if the wounds are thoroughly sweet and aseptic. The healing of the wound is benefited by the restoration of normal circulation in the same way as the forming of the callus.

* Johnson and Johnson's brand was used this time.

I now beg to record my own case *in extenso*, and to quote a few others from the Berlin Hospital. As it was my first case, I was, perhaps, a little over-cautious, so that the result may not be quite as striking as the home cases.

Mr. F. H. R., auctioneer, Albury, a powerfully-built gentleman, 26 years, height 6ft. 6in., weight 14st. 2lbs., thrown from his horse and kicked on the shin on November 11th, 1894, compound comminuted fracture of the tibia between middle and lower third; fibula simply fractured. Three wounds over inner surface of the tibia, one about one-and-a-half inch in diameter, the others smaller, skin bruised all round, profuse bleeding, swelling up to the knee, down to the malleolus, wound dirty, as patient had to lie in the dust of the road for nearly an hour before he was conveyed to his home. Several pieces of bone loose in the wound; a probe penetrates about three inches deep between pieces of bone. Lower fragment displaced forward and upward with a sharp edge dangerously near the skin. Upper fragment displaced backward, leaving a deep indent at the front. Surroundings of wounds are shaved, and, as well as the wounds, thoroughly washed with hot carbolic lotion. Loose pieces removed, wounds dusted with iodoform powder, filled with iodoform gauze, covered with aseptic hydrophil gauze and surgeon's wool. Bones set by traction, leg bandaged to long straight side and shorter top and back splints, extension by stirrup with about five pounds weight attached. During the night sleeplessness, much pain.

12th. Bandage fits well, no pain except when leg is shifted.

13th. Splints taken off, wound perfectly clean, swelling gone down considerably; chloroform; sharp edges of bones snipped off, wound cleaned and dressed as before; profuse bleeding stopped by pressure; plaster-of-paris (seven of Arnold's six-inch bandages) as described above, over small pad of hydrophil gauze over wound; plaster only carried a little above condyles.

14th. Some blood oozed out, saturating surface, but perfectly dried up; no pain.

15th. Severe pains at knee from pressure of sharp edge of the bandage; toes neither swollen nor discoloured; bandage a little tight at condyles; a few short incisions into the margin of the bandage stopped the pain at once.

22nd. No pain all the time; change of bandage; smallest wound healed, bigger ones healthy looking; triangular piece of bone ($1\frac{1}{2} \times \frac{3}{4} \times \frac{1}{2}$ in.) loose in recess of wound, removed; slight mark of pressure on top of inner ankle, caused by the first wooden splint; protected as well as the prominent points of condyles by very tiny pad of wool; bones at spot of fracture gelling, but in

good position; dressing of wound and bandage as before.

23rd. Bandage fits well, thoroughly hard, no pain, even if leg is shifted.

26th. No pain if leg is hanging down and resting on the ground, the patient in a sitting position; bandage a little loose.

28th. Change of bandage; wounds look healthy, fragments movable, but apparently in fibrous union.

1st December. After letting the leg hang down for some time every day, patient gets up on crutches, injured leg in a strap passing over shoulders.

4th. Patient puts the leg on the ground, feels no pain, even when he puts some weight on it.

8th. Bandage a little loose; patient had slight pain on place of fracture from throwing himself about at night; a few days' rest in bed.

12th. Change of bandage; wound granulating, slight eczema (from iodoform); fracture well knitted; sharp edge of lower fragment scarcely palpable.

17th. Plaster-of-paris did not get thoroughly hard*; patient allowed to walk about only with leg suspended in strap.

18th. Plaster-of-paris replaced by Arnold's bandages.

20th. Patient walks about on sticks.

Jan. 8.—Plaster removed; perfect consolidation; big callus; wound all but healed; very little stiffness of knee and ankle joints; both bend freely; muscles somewhat weak, so that patient does not trust himself to walk without stick. The place of fracture is protected for a few days with a shield of celluloid, an elastic web bandage applied. Shortening hardly perceptible, no malformation of the leg. The leg gains power day by day.

In reviewing this case, we see a compound comminuted fracture of both bones of the leg, with numerous fragments of bone partly coming away, partly healing in. The patient has four changes of bandage, one of which is caused by an unsatisfactory plaster-of-paris being used. He had severe pains only once before the plaster was applied; can shift his leg about and let it hang down on the fourteenth day; walk about on crutches on the eighteenth, put the foot to the ground on the twenty-third, use sticks after five weeks (ten days' delay having been caused by the unsatisfactory plaster-of-paris). The wounds never discharge any pus; close readily. The last bandage is removed after eight weeks, with the wound healed, the bones perfectly consoli-

dated. The patient was confined to his bed only for eighteen days.

Finally, I quote a few cases from the above-named source. These cases were presented in the Society of the Doctors of the Berlin Charité, by Dr. Korsch, on the 10th November, 1892. Most of them were only partly healed, as the lecturer wanted to demonstrate the different stages of the treatment. I quote those cured:—

Case 4.—Labourer, 22 years.

28th Sept., 1892.—Fracture of left leg, middle, through being run over by omnibus. Difference of circumference, eight inches.

30th. Swelling down one inch. First ambulatory plaster bandage.

8th October.—Bandage loose; renewed. Swelling one inch and a-half less.

18th. Third bandage.

26th. Bandage removed; bones consolidated; (four weeks).

Case 5.—Carpenter, 38 years.

23rd October, 1892.—Fracture of left inner malleolus, through being run over. Much swelling and extravasation of blood; massage; wet compresses.

27th. Ambulatory plaster-of-paris bandage.

10th November.—Fracture consolidated; patient walks with stick (three weeks).

Case 7.—Labourer, 32 years.

6th October, 1892.—Compound fracture of left leg, between middle and lower third, through fall on the edge of a case; over inner surface of tibia open wound eight inches long, from which the proximal piece of tibia protrudes; bleeding from torn artery; fibula simply fractured; artery ligatured; several pieces of bone removed; wound filled with iodoform gauze; bandage with absorbent moss-wool and cardboard.

13th. Bone-ends two inches distant, approached by the fragments of the fibula being made to overlap; wound slightly drawn together by sutures; small tampon; first ambulatory bandage.

17th. Patient gets out of bed on sticks; fainting fit.

24th. Change of bandage, which is saturated with secretion.

5th November.—Third bandage; bones pretty firm; removal of stitches and tampon.

19th. Removal of plaster-of-paris; bones consolidated; wound not quite healed yet. (Six weeks).

Case 9.—Merchant, 40 years.

14th August, 1891.—Compound fracture of left leg, between middle and lower third, through being kicked by horse; wound ten inches; several bone fragments removed; Watson's splint,

October 26th.—Decubitus at heel ; back splint moulded of plaster-of-paris, with tow.

7th November.—Bones not yet consolidated ; ambulatory plaster-of-paris bandage.

5th December.—Consolidation, with powerful callus.

Here we have a fracture that would not knit for three months under the usual splint treatment, but united within one month under the ambulatory plaster bandage. This same patient fractured the same leg higher up nine months later by a fall from a staircase, with much dislocation, splintering, and open wound (29th July, 1892). The ambulatory treatment was adopted on the same day ; the bandage changed on the 5th August ; removed on the 5th September, when the bone was consolidated ; the wound was perfectly healed on the 1st November (two months).

For further cases, especially of fractured thighs, I must refer to the quoted publications, which have since been followed by several others from private practice, with equally favourable results.*

NON-MALIGNANT TUMOUR OF RECTUM.—MULTIPLE POLYPI OF LARGE INTESTINE.—FIBRO-CYSTIC SARCOMA OF BOTH OVARIES, WITH SECONDARY DEPOSITS IN LIVER, KIDNEYS AND LUMBAR GLANDS.

By WALTER FOWLER, M.A., M.B., B.C., CAMB. ; F.R.C.S. ENG., ECHUCA, VIC.

SARAH R., aged 39, admitted into the hospital October 13, 1893. Has six children living, two dead. Last confinement eighteen months ago. Has always, with the exception of the present complaint, been healthy, and has lived in Victoria all her life. Mother alive and healthy. Father died of consumption.

History of Present Complaint.—Has suffered from constant "dysentery" for three years and a half, and for some time previously was subject to occasional attacks of diarrhoea. During the last two years and a half she has noticed that the bowel came down with every motion, and for the last twelve months the bowel has often been outside in the intervals of going to stool. She states also that during the past year her motions have been mixed with blood and matter, and that her worst trouble is that "hot water" is continually flowing from the back passage. She

has a burning pain in the lower part of the stomach, and has lost flesh the last three months.

Condition on Admission.—Haggard-looking woman, but with no definite cachexia. On separating the buttocks, there was noticed a stream of mucus literally pouring from the rectum, which fully accounted for her at first apparently exaggerated statement that "hot water" continually flowed from the back passage. Digital examination per rectum disclosed an irregular mass of soft, sessile growth, which was easily extruded from the rectum, when it appeared as a cauliflower-like mass, the size of a tangerine orange. In fact, it had the appearance and consistence of a soft papilloma. It bled readily during the necessary manipulation. There was no ulceration, no induration, and no fixation. Subsequently, when the patient was under chloroform, it was seen that the growth had the peculiarity of being annular, involving the whole calibre of the bowel at a distance of about two inches from the anus. There was no difficulty in the diagnosis of the non-malignant type of the tumour, owing to the absence of induration and its perfect mobility. The history, too, detailed above, corroborated this view. The prognosis on this occasion was good. Under chloroform the tumor was well extruded from the rectum by two fingers per vaginam ; ligatured in sections (necessary from its annular arrangement) and cut away. Weight of growth removed was 2ozs.

Microscopical Examination of Rectal Tumour.—The section presented innumerable long and delicate papillae, covered with a single layer of columnar epithelium. The stroma consisted of somewhat loose fibrous tissue, with offshoots carrying capillaries, running up the centres of the papillae. Embedded in the stroma were many leucocytes, especially numerous at the bases of the papillae and in the papillae themselves. Here and there in the deeper parts were observed hypertrophied glands. There was no epithelial proliferation anywhere. The papillae were very similar in appearance to the villi of the small intestine, but were rather larger and inclined to be club-shaped.

2nd November, 1893.—Discharged from the hospital, all ligatures having come away.

5th July, 1894.—Weight increased by two stone ; health excellent, and able to do a hard day's work. Has had no straining at stool ; has passed no blood or mucus, and there has been no prolapse. However, there is occasional diarrhoea. On rectal examination there was no recurrence of the growth at the site of operation, but high up, just within touch of the finger, could be felt a few polypoid excrescences. These evidently accounted for the diarrhoea, and the

* KORSCH.—Über Behandlung der Unterschänkel Brüche in Umbegeben, Charité Annalen, VIII. Jahrg. und Therapeutische Monatshefte. Aug., 1894. Also: Modification der Wundtuchchen Holsverbande. — *Berl. Klin. Wochenschr.*, 1894, No. 6.

question naturally arose as to how far up the bowel these polypoid nodules extended. The patient lived eighteen miles away, and expressed her readiness to submit to a further examination under chloroform, and operation, if necessary, as soon as she could leave her home with convenience.

16th November, 1894.—The patient presented herself at my house to-day in a deplorable condition, with death evidently written on her face. The abdomen was enormously enlarged, with distended veins coursing over it. There was tense ascites, and the intestines were pushed up towards the liver, and below them, here and there, could be felt a few hard nodules. She stated that her "stomach" had only begun to swell three months ago. The legs, especially the left, were greatly enlarged with anasarca. The *cul-de-sac* of the vagina were obliterated by an elastic swelling—the vagina and cervix being otherwise normal. Menses had ceased for three months. In the rectum nothing could be felt at the site of the operation, but just within reach of the finger could be felt several pendulous nodules. Diarrhoea had continued since the operation. From the appearance of the patient one would have thought that I had made a mistake in the diagnosis of a non-malignant tumour of the rectum; but this was impossible, as there was no recurrence of the growth removed nearly twelve months previously, and there was the actual and visible structure of the growth beneath the microscope. Therefore, my diagnosis was still that of non-malignant villous or papillomatous growth or growths extending for an unknown distance up the intestine. At the same time, I was thoroughly at a loss to understand the significance of the hard lumps felt in the abdominal cavity. I sent the patient to the hospital, under the care of Dr. Smith, who, a few days subsequently, relieved her of several pints of ascitic fluid, and gave it as his opinion that there was malignant disease of one of the ovaries. Death occurred on the 6th December, 1894, and the following viscera were submitted to my examination.

1. *Large Intestine*.—The whole of the interior, from the ileo-cæcal valve to a point on a level with the os uteri, was studded with innumerable sub-mucous polypi, varying in size from a split pea to a horse-bean. Some were sessile, but the majority had relatively long and slender pedicles. Their shape was more or less globular, and their surface velvety.

The accompanying photograph shows fairly well the appearance detailed; but the pedicles of the polypi are, unfortunately, rather obscured.

Below is seen a portion of the cervix uteri attached, and above is well shown the ulcer and stricture in the sigmoid flexure.

In the region of the sigmoid flexure was a moderate stricture caused by a hard cicatrising ulcer of a simple nature (verified by microscope) that had perforated most of the gut wall, and was adherent to the posterior parietes. The site of the operation in the rectum was free from growth, and the small intestine was normal.

Microscopical examination of intestinal polypus—Exhibited a distinct papillomatous type. The papillæ were some slender, some club-shaped, but not of that inordinate length that was observed in the case of the rectal growth. Surface lined with columnar epithelium, capillaries were dilated and tortuous, and extended into papillæ. Below the papillæ were seen many Lieberkuhn follicles in transverse section. They were greatly dilated; all the space not occupied by capillaries and follicles was filled up with plump leucocytes.

2. *Ovaries with uterus*.—Uterus normal; each ovary was about the size of a foetal head at term. Multilocular with hard nodular growths in the walls of the loculi, the contents of which were in some pus, and in others broken down grumous material. The only adhesion was a slight one of the right ovary to a coil of intestine. Microscopical examination disclosed the structure of a round-celled fibro-cystic sarcoma.

3. *Liver*.—Almost entirely a mass of new growth, round-celled sarcoma.

4. *Lumbar gland*.—Much enlarged with secondary deposits of sarcoma.

5. *Mesenteric glands*.—Normal.

6. *Kidneys*.—Studded with small secondary deposits of new growth (not examined microscopically). In substance of left kidney was a small calculus. Pancreas and spleen appeared to be normal. Neither the thorax nor the cranial cavity was opened.

Commentary.—One hardly expected to find such a mass of disease as was disclosed at this autopsy. From the evidence and facts of the case, there is no getting away from the conclusion that here we had two distinct types of new growth—the non-malignant and the malignant—occurring in the same individual. Let me take the intestinal growths first. They were evidently long antecedent to the ovarian mischief, and above all other considerations are the more interesting. I would call the rectal growth a non-malignant villous tumour (papillomatous type), and as such is rare; but I by no means wish to convey the impression that the rectal growth and the intestinal growths were different; far from it, for I think one must admit that they were both homologous, part and parcel of the same morbid pro-

cess; they were both papillomata, and such differences of contour as they presented were trivial, and could be accounted for by local conditions. The annular arrangement of the rectal tumour was interesting; that, and its conglomerate shape, I would suggest were caused by long-continued peristalsis acting on polypi that were originally discrete. The ulcer in the sigmoid flexure was probably caused by a sloughing of one or more of the polypi, and kept up by lodgment of faecal material. The sarcoma of the ovaries must have been of very rapid growth, for there was no suspicion of anything of the kind five months previous to death. The growth was primary in the ovaries and secondary in the lumbar glands, liver and kidneys, the ascites and anasarca being, of course, a natural sequence of the sarcomatous condition in the above-named organs.

CASE OF HERPES ZOSTER, ACCOMPANIED BY PARALYSIS OF THE AUDITORY AND FACIAL NERVES.

(Read before the Queensland Medical Society.)

BY J. LOCKHART GIBSON, M.D. EDIN., M.R.C.S. ENG.; HON. SURGEON FOR EYE, EAR AND THROAT, BRISBANE HOSPITAL FOR SICK CHILDREN.

THE following case of herpes zoster attacking the region of the auricle is unusual and interesting on account of the fact that other nerves besides those supplying sensation to the skin of the parts affected became implicated.

Two years ago I was consulted by a male patient, aged fifty-nine years, on account of severe pains flying about the right side of his head, chiefly in the neighbourhood of the ear. The pains were described to be of a shooting character, and to be increased by frequent severe paroxysms.

History.—He stated that some eight or ten months ago he suffered from a somewhat similar attack, he thinks on the other side of his head. This former attack began with pains at the back of his head, and stiffness in the neck, but was accompanied by no eruption on the skin. He knows of nothing which could account for present attack, except a fall from his horse upon the back of his head ten days before its onset. His head had been hurt at the time, but he suffered no inconvenience after two or three days. He noticed an eruption below his ear last night for the first time (*i.e.*, four days after the commencement of the neuralgic pains).

Present Condition.—An eruption of herpes over the right side of the supra-sternal notch over

the right thyroid region, and amongst the beard under the lower jaw, on the skin just below the tip of the mastoid, and stretching upwards from this over the mastoid region, behind and close to the auricle, and on to the scalp. Although the skin surface affected seems large, it will be noticed that it is all supplied by nerves, which take origin from the second and third cervical nerves, *viz.*, almost the whole area supplied by the superficial cervical nerve; part of that supplied by the great auricular nerve, part of that supplied by the small occipital nerve and its mastoid division.

The diagnosis was evident. I prescribed phosphide of zinc, as suggested by Ashburton Thompson, and which I had on previous occasions found apparently beneficial in attacks of zoster. It seemed to me important to treat the patient actively, on account of the observed fact that the neuralgic pain of zoster is apt to persist in elderly subjects for lengthened periods, occasionally until the end of life; $\frac{1}{4}$ grain pills of phosphide of zinc were given, therefore, every three hours while awake. The eruption was painted with flexible collodion. Two days afterwards the pain was, if anything, greater. He had had no sleep, and the eruption was more marked, as well as the swelling and inflammation of the regions of skin implicated. Ten grains of antipyrin were ordered each night in addition to the phosphide of zinc, and in the hope of inducing sleep. Four days later the eruption was drying up and crusting, and the pain had considerably abated. Antipyrin, which had failed to induce sleep, had been replaced by sulphonal, fifteen grains, with more satisfactory result. Upon this day, *i.e.*, six days after I saw him, he complained of having had a beating noise in his right ear ever since the attack commenced, and of hearing badly. I found evidence of chronic middle ear catarrh in both ears, that hearing to tests was extremely deficient on the right side, 1-48 of natural, and moderately so on the left side, half of natural. Tuning-fork was heard distinctly better by air than by bone conduction on either side. He stated very distinctly that prior to the attack his right ear had been as sharp as his left, and that his left ear possessed its natural hearing throughout the attack. Upon this day I noticed for the first time distinct slight but general facial paralysis, quite separate from the former rigid state which had been assumed by the muscles of the right side of the face on account of the pain. As he had important business to transact in the country, and as he felt himself sufficiently well to travel, he left town on the following day for ten days. Upon his return he informed me

that the eruption had steadily improved after I saw him, and that the pain had disappeared with it. But he described, without any leading questions, a distinct advance in the facial palsy for the first few days after leaving town, leading to his food accumulating in his right cheek, to absence of wrinkles on the right side of the forehead, and to a falling open of the right eyelid. This condition disappeared very rapidly after the first week, and upon his return had practically gone. The singing in his right ear had lessened distinctly, and upon testing I found that he heard half as much again as formerly. A weak induced current applied with one pole behind the ear and the other in the meatus, caused an immediate distinct improvement, and five applications employed during the week which he was able to stay in town, besides in each case causing a recognisable immediate improvement, gave an improvement at the end of the week to nearly double the hearing possessed upon his return to town, or three times that possessed during the height of the attack. I have had no further opportunity of examining the patient, but heard a short time ago that, although the hearing had considerably improved in his right ear, it has not returned to normal, and the singing has to some extent persisted. He was instructed to take twenty minim doses of tinct. nucis. vom., with five grain doses of iodide of potassium 3cc. daily for a week or two after leaving. Accepting the patient's statement, which in the case of a highly educated and intelligent man we are justified in doing, that prior to the attack his hearing in both ears was equal and that he had no previous singing in the right ear, together with my own observation that during the attack his hearing was worse than after it had subsided, although the skin of the meatus was in no way implicated in the herpetic eruption; and taking also the distinct and repeated improvement under the induced current, it is fair to argue that the auditory nerve was involved in the nerve lesion. The diminished hearing could hardly be due to paralysis of the tensor tympani, partly because this last is supplied through the otic ganglion by the fifth nerve, and chiefly because the tuning-fork gave no indication of the deafness being of a conductive nature. The latter part of this objection would apply to paralysis of the stapedius muscle. Implication of the facial nerve is also rare and interesting. With it we have in this case three varieties of nerves involved in the attack, viz.: ordinary sensibility, special sensibility and motor. Its paralysis seems to have been fairly complete, though of short duration.

Von Bärensprung demonstrated in 1861, that in herpes zoster there is in many cases interstitial neuritis of the ganglia, on the posterior roots of the spinal nerves, in addition to the congestion and neuritis of the nerve itself; while Dubler found it associated in some cases with peripheral neuritis without central disease. Malcolm Morris* states that in some cases the lesion is in the posterior spinal root between the cord and the ganglion or in the posterior columns of the cord, and the same author says that the lesion may be due to hæmorrhage, and not to inflammation. One is tempted to hazard the suggestion that the auditory nerve root may be considered analogous to the posterior root of a spinal nerve, the facial being its anterior root, and to think that the auditory nerve root was in this instance affected as were the posterior roots of the second and third cervical nerves. Following upon this idea, however, it is difficult to explain implication of the facial, as it could hardly have been brought about through the fibres which join its geniculate ganglion from the auditory nerve. Gruber† states that in many cases of herpes auricularis deafness is present as well as subjective auditory sensations, even if the auditory canal is not affected. He does not, however, mention whether the deafness appears to be due to fault in the conducting or perceiving mechanism. Gruber states that the disease seldom extends over ten days, though it may last for several weeks; while Malcolm Morris says that zoster tends to spontaneous cure in from a fortnight to a month. All observers seem agreed that in those advanced in years the neuralgic pain is apt to be more severe and more persistent. Fagge says months, or even years, and Trousseau had a case where it persisted for fourteen years. As our case, therefore, was comparatively free from pain seven days after the appearance of the eruption, it is possible that the phosphide of zinc may have been of service. Politzer, however, states for herpes auricularis that neuralgic pain has never to his knowledge been observed to persist after the disappearance of the eruption. He speaks more particularly, however, of herpes confined to the auricle itself.

Points worthy of special note in my case are the persistence of part of the auditory nerve paralysis, and of some of the tinnitus aurium. These seem parallel to the anæsthetic areas and to the persistence of neuralgic pain after some cases of intercostal zoster. Jamieson* mentions, upon the authority of Strübing, that the motor

* Diseases of the skin.

† Diseases of the ear.

nerve filaments participate also in the neuritis, and that this explains why paralysis may occur in the course of zoster. Strübing,* he says, has collected a number of such cases, and finds that the eruption in most instances precedes the paralysis. During 1894, two cases of motor paralysis accompanying zoster were reported in the *Lancet*, viz. :—

Dr. Naorogi B. Darabseth, of Bombay, reported a case† of Bell's paralysis following herpes zoster. The eruption covered much the same area as in my patient, but extended also to the face and forehead, and implicated also the fourth intercostal space. He was seen on the 8th day of the attack, when marked facial paralysis was noted to exist, which lasted for twenty-eight days.

Mr. Arthur H. Howard reported a case‡ of herpes frontalis in which ptosis occurred during recovery. It came on about the tenth day of the attack, when the eruption was beginning to show signs of subsiding, and it lasted for 11 days.

THE TREATMENT OF DIPHTHERIA WITH ANTI-TOXIN.

BY EUGEN HIRSCHFELD, M.D. STRASSBURG,
HONORARY BACTERIOLOGIST TO THE BRISBANE HOSPITAL.

THE following has been the first case of diphtheria, I believe, which has been treated with the anti-toxin of Behring in Queen-land. I may mention that previous to this case I attended two other patients suffering from diphtheria. However, in view of the limited supply of serum at my disposal, I refrained from using it in these cases, because in both the affection was comparatively mild, the exudation of membrane being confined to the tonsils. Both recovered without any further complications.

Jennie Pettigrew, five years old, native of Queensland, and living in South Brisbane, was sent by Dr. Kebbel into the Brisbane Hospital on the night of February 23. Patient's mother states that the child had been well up till the evening of February 20, when she noticed the child getting hoarse and feverish. The child did not seem to get any worse the following day, but on the 22nd a slight difficulty of breathing and cough with expectoration showed themselves. The breathing becoming more and more difficult,

the child was sent into the hospital at about 10.30 p.m. on February 23. The strongly-built child has membranes on both tonsils, the posterior wall of the pharynx, and a patch on the uvula; the voice is quite hoarse. Breathing difficult—twenty-eight respirations per minute; both the inspiration and expiration are prolonged and laboured. Attacks of great dyspnoea occur about every two hours. Tongue very coated; the lymphatic submaxillary glands are swollen on both sides.

The child is very drowsy, but has been vomiting the iron mixture which had been prescribed for her the day previous; no membrane coughed up. Clinical diagnosis: diphtheria of tonsils, pharynx and larynx. Microscopical and bacteriological examination showed the presence of a small number of Klebs-Löffler diphtheria bacilli and a great abundance of staphylococci and diplococci; so that there was no doubt that a good deal of septic poisoning was present besides the diphtheria, which accounted for the drowsy condition of the patient. The prognosis was pronounced to be decidedly unfavourable by all who saw the child. The temperature was 99.4, pulse 124 at 9 a.m.

At 11.30 a.m. injection of 6c.c. anti-toxin (Behring) into the gluteal region. The bowels were kept open with calomel, the mouth washed out every hour with 3 % solution of chlorate of potash, one tablespoonful of port wine every hour, and milk and sodawater as nourishment, while every other medicine was discontinued. The dyspnoea shortly afterwards becoming extreme, intubation was performed by Dr. Lawes two hours later, whereupon the breathing got much easier. Temperature went up to 102° at 10 p.m. Pulse 130°, resp. 32.

February 25th.—Membranes still in the pharynx. Temp. between 101.6 and 100; pulse between 124 and 136; resp. 24 to 40, but not laboured; tongue is much cleaner and the child less drowsy; urine free from albumen, acid, and scanty. The patient was without the tube for about three hours and a half, when she had again to be intubated. Cough loose.

February 26th.—Temp. between 99.6 and 100.4; pulse 120; resp. 24; crepitant râles in the left lung. Expectoration has increased considerably.

February 27th.—Crepitant râles have disappeared; one patch of membrane on the left tonsil, the lymphatic glands swollen only on the left side. Temp. 98.2 to 98.8; pulse 112 to 120; resp. 20. Tube removed.

February 28th.—Temp. 98 to 98.8; pulse 96 to 112; resp. 20.

March 1.—Temp. 98 to 98.8; pulse 96 to 112; resp. 20. Membranes disappeared.

* *Deutsches Archiv für Klin. Med.* October 1886.

† *Lancet*, p. 1129, May 5, 1894.

‡ *Lancet*, p. 881, October 13, 1894.

March 2.—Temp. 97·6 to 99; pulse 90 to 112; resp. 20.

March 3.—Temp. 97·6 to 98·8; pulse 96 to 100; resp. 20.

The child is now convalescent. She continues to improve up to the time of writing. (March 6th).

Remarks.—The very serious condition of the patient before the anti-toxin treatment was begun makes its success all the more remarkable. The injection took place on the fourth day of the illness, when the larynx was already implicated. The following points are worthy of note. No critical fall in the temperature or in the frequency of the pulse followed the injection of the serum. The chief improvement effected by it was the greater looseness of the expectoration, owing most likely to the separation of the false membranes. The intubation, which took place almost immediately after the injection of the anti-toxin, gave the latter time to act. Neither the urticaria exanthem nor albuminuria, as reported by other observers, were found to be present in this case, following on the administration of the serum. At the same time, I should like to emphasise the importance of the bacteriological examination. The presence of a great number of staphylococci demanded an energetic local antiseptic of the mouth, whereupon, the production and absorption of septic toxins being stopped, the drowsy condition of the child disappeared, which had been due to septic poisoning. Further, the appearance of diplococci in the mouth preceded the appearance of pneumonic complications, which, therefore, could be guarded against. I think it of great importance in diphtheria to attend to the principal excretory organs, as only by this means the toxins produced by the bacillus diphtheriæ and septic-micro-organisms can be removed from the blood. Due attention to the function of the skin, bowels, kidneys, and salivatory glands will, therefore, aid considerably the action of the anti-toxin in the treatment of diphtheria.

ANNUAL MEDICAL DINNER.

THE second annual dinner of the combined Medical Associations of New South Wales will be held at Aarons' Exchange Hotel, Sydney, on Tuesday, May 28. Dr. Nickson (President of the Newcastle Medical Society) will take the chair. Tickets (price £1 ls.) may be had from the hon. secretary, Dr. P. J. Collins, Queen-street, Woollahra.

Mr. BRUCK has made arrangements for a regular weekly supply of "*Ruffert's Anti-Toxin*," but, pending its arrival, Mr. Bruck will supply Behring's Anti-Toxin No. 1, at 7s. 6d., and Behring's No. 2 at 12s. 6d. a bottle; also, Burroughs & Wellcome's at 5s. a bottle.

PROCEEDINGS OF BRANCHES.

SPECIAL NOTICE.

The Australasian Medical Gazette is supplied to all Members of the N. S. Wales, South Australian, and Victorian Branches Free of Cost. After the delivery of the March Issue, however, no member whose subscription to his branch for the current year remains unpaid shall be supplied with any further copies of the Gazette until the said subscription shall have been paid. The respective councils do not hold themselves responsible for the supply of back numbers which under this rule may have been undelivered.

Subscriptions should be forwarded to the respective branch treasurers as below—

New South Wales, Dr. Crago, 34 College Street, Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

GENERAL meeting, held on Friday, 26th April, 1895, at the Royal Society's Room, Sydney. Dr. Jenkins (president) in the chair. Fifty-four members were present, among them Drs. Hinder, Sydney Jones, Pockley, Thring, Clubbe, J. A. Dick, Gordon Macleod, Todd, Coutie, Crago, Tidswell, Angel Money, Knaggs, Fiaschi, Colpe, MacSwinney, E. Fairfax Ross, Neill, McKay, Armstrong, Russell, Litchfield, Kendall, Gladden, Jamieson, G. C. Smith, Megginson, Abbott, Macdonald Gill, Binney, F. W. Hall, Roth, West, Martin, G. A. Marshall, Worrall, Thos. Dixon, Mullins, Collins, Jas. McLeod, Scot-Skirving, Murray Will, Huxtable, Nash (Wallsend), Spencer, Ackland O'Hara, Professor Stuart, Dr. Chas. Martin, &c. Visitor: Dr. Kennedy, Hay.

CORRESPONDENCE.

From Mrs. White, of Singleton, acknowledging letter of sympathy.

From Lady Duff, acknowledging letter of condolence.

NEW MEMBERS.

Dr. Mead, Quirindi; Dr. Cunningham, Cobar; Dr. G. H. Phillips, Parramatta; Dr. L. G. Davidson, Balmain; Dr. McCredie, Glebe Point; Dr. Hollis, M.P., Goulburn.

Dr. Kendall exhibited a patient who had been relieved of long-standing sciatica by gymnastics.

Dr. Angel Money gave notice of the following resolution:—"That no member of Council hold office for more than three consecutive years."

The PRESIDENT, having explained that the election of auditors had been overlooked, moved "That Drs. A. Jarvie Hood and G. L. Mullins, who had been duly proposed and seconded, be elected auditors for the ensuing year." Carried *nem con*.

Dr. CLUBBE exhibited a female child of three years of age, suffering from a primary sore on the buttock and well-marked rash over trunk.

Dr. ANGEL MONEY commented upon the case, and remarked the rarity of such cases.

Drs. Morgan Martin and Neill reported that they had had similar cases under their care lately.

Dr. POCKLEY read some remarks on the prescribing and wearing of spectacles, and gave a demonstration of modern ophthalmic optical instruments and appliances.

The President (Dr. Jenkins) congratulated Dr Pockley on his admirable paper and the interesting demonstration.

Dr. GORDON MACLEOD said that Dr. Pockley had raised in his paper and demonstration very many points of practical interest and importance. In the estimation of errors of refraction and convergence, everyone had his pet routine in the selection of methods, and was inclined to place more or less reliance on those which in his hands yielded the most satisfactory results. As it was the total refractive error, and not the corneal astigmatism only that was usually wanted, there was little chance of the instrument of Javal and Schiotz having an other than limited use. In the case of elderly patients, however, where, the astigmatism once ascertained objectively, the remaining error could be easily arrived at, it had a special application. That it was the lower rather than the higher degrees of ametropia that often produced most eye-strain was a fact borne out daily in practice. The other day a patient came under observation, with 10 D of hypermetropia and 2 D additional of astigmatism, who had never considered her symptoms bad enough to be attended to. One detail in prescribing glasses, incidentally referred to, deserved attention, viz., the use of periscopic lenses. In high degrees of hypermetropia, and in aphakia after cataract extraction, the range of accurate vision is limited to a small area surrounding the optical centre of a strongly convex lens. By having the latter ground with its posterior surface concave, the centre of the curvature practically coinciding with the centre of rotation of the eyeball, the vertical and lateral range of vision is increased, and the comfort and satisfaction of the patient greatly added to. Of recent years this principle has been adapted to compound lenses.

Dr. Hinder read a paper on a first fifty cases of abdominal section.

FIFTY CASES OF ABDOMINAL SECTION.

By H. V. C. HINDER, M.B., CH. M., SYD., OF ASHFIELD, N.S.W.

I wish to bring before you this evening a series of fifty cases of abdominal section, being the first fifty cases operated on by myself. In doing so, I hope to be able to lay such stress on my blunders that those who follow after, or are even now working in the same field, may note the dangerous ground, and seek safer paths to attain their ends.

In my opinion, a record of successful cases is useful in two ways. It tells us what may be done, and it places before us a high standard which we must struggle to reach.

A list of successful cases glorifies the operator, and their recital ministers to his self-conceit; but how much more beneficial to his fellow men, and how much more salutary to himself, would be the wholesome discipline of a confession of the blunders he has made, and their gruesome results.

This mental flagellation is severe for the tyro in surgery, but should be a small matter to

the experienced man, whose death record must be comparatively much smaller.

Frequently, in speaking to operators of a difficult or unsuccessful case, I have invited instruction from their own failures; but, though the astonishingly-successful cases are readily forthcoming, the unaccountable deaths are fairly well forgotten.

In bringing these cases before you to-night, I hope to avoid ordinary details, and introduce, as far as possible, only points of interest.

These cases include exploratory laparotomy, laparotomy for ovarian disease, for tubal disease, hysterectomy, for intestinal obstruction, for ectopic gestation, for removal of the vermiform appendix, and three cases of tubercular disease.

Let me begin with the first of the exploratory cases. Six years ago, while I was a resident at the Prince Alfred Hospital, this patient was in the ward suffering from typhoid fever. She was then thirteen years old, and had menstruated.

During convalescence she suffered from an attack of pelvic peritonitis, and a mass as large as a goose-egg was felt in the right ovarian region. She recovered fairly well, but always had pain in that side. She says she was curetted at the Prince Alfred Hospital twice within the next two years without experiencing any marked relief. Irregular, painful, and at times profuse menstruation persisted up to the time I saw her, when she was thin and worn, and utterly incapacitated from household duties.

She was kept in bed, strictly at rest, for six weeks, and treated with hot douches, aperients, &c., for part of the time, but without any improvement.

After consultation, I opened the abdomen, and found both tubes thickened slightly, puckered with large varicose veins in the broad ligaments, more on the right side than on the left. She was put to bed and given to understand that all would be well. After four months' stay in bed, the pain remaining as bad as before, and even worse at times, keeping her awake at night, I opened the abdomen again, and found the same condition as before, only somewhat exaggerated, and it was decided by myself and confreres who had witnessed the first opening to remove the appendages on both sides.

I saw the patient the other day; she was rosy, fat, and well. She said she was free from pain, and able to do housework, and, in fact, anything that was required of her.

Would it have been possible for me to have acted differently under the circumstances, and restore the girl to a happy condition of health?

The second exploratory operation was associated with a case of much interest.

Six months after the removal of a double pyo-salpinx, the patient returned with a very painful menstrual flow every three weeks, lasting nine days, and occasional discharge of pus per rectum, preceded by prolonged attacks of colicky pain. On opening the abdomen, I discovered several coils of small intestine matted together at the site of the left stump.

With a peritoneal surface passing smoothly from one coil to another, and ignorance as to the precise condition of the abscess cavity, which I thought probable was inside the mass, I decided to leave her alone. Twelve months afterwards she returned, looking very ill, and begging me to do something to relieve her of her pain and the frequent profuse and painful menstruation; the discharge of pus was as before. I removed the uterus with a little difficulty, owing to the short thick stump of the tube on the left side, and she made an excellent recovery. I last saw her five months after the operation. Pain had ceased, bowels acted regularly, and no pus had been discharged since the operation.

I shall now proceed to the cases of ovarian disease.

My first abdominal section was interesting in many ways. There was a history of twelve years' constant and varying pain, with very profuse menstruation every three weeks. The patient was thin and pale and worn, P.V. a rounded mass could be felt, hard, firmly fixed, and moving with the uterus, which was three-quarters of an inch over the normal length.

I innocently concluded that this was a case of multiple-fibroid disease, and hoped by removal of the ovaries, to effect a cure. On opening the abdomen, I found two cysts firmly adherent to the uterus, very tense and hard. The smaller one was easily freed and completely removed; the larger was so bound down at the base that I was able to do nothing but burst it, catch up the fluid with sponges, and remove all I could separate—that is to say, one-third of the cyst wall was left behind. A drainage tube was used, but, through some delay in removing stitches and tube, suppuration was set up in the stitch-holes, which infected the tube opening, so that my patient was not up till the end of the fourth week.

Eighteen months after, the patient returned, and, on examination, I discovered a cystic tumour on the side from which the cyst wall had been partially removed. I opened the abdomen, and (note this fact) not a trace of adhesion could be discovered between the bowels, the abdominal wall or uterus, &c., showing that a pelvic peritonitis with plastic effusion may occur, and completely clear up, without leaving any adhesions which can be felt or seen either. The

cyst, I at once saw, in the light of greater experience, could not possibly be removed. I stitched it to the abdominal wound, and drained.

The patient made an easy recovery, but she still menstruates, though the flow is not excessive, and fairly regular.

Of these seventeen laparotomies for ovarian disease, one died within four days of intestinal obstruction, and two others at the end of the third week.

The first death followed a simple operation, associated with very little manipulation. It was my first case of this kind. I delayed opening the abdomen, after trying strong aperients, till I had given repeated injections. The patient meanwhile became so ill that operation would have been hopeless, and she rapidly sank.

The next was a case of dermoid cyst of the right ovary, holding about a quart of dirty caseous material, and a smaller cyst of the left ovary.

Symptoms of any sort were entirely absent, till inability to pass urine induced the patient to send for me, and then the presence of the cysts was first made known to her.

They were both fairly adherent, and the larger could only be separated with some difficulty. It burst just as it was almost completely freed. We washed and sponged out freely with warm water, and used no tube.

On the eighteenth day, when the patient was sitting up, and the wound had healed, symptoms of intestinal obstruction set in. Aperients and enemata had both failed, and I was anxious to operate; but the husband begged me to give his wife a chance, till, when too late, I opened up, but the collapse was so great that before we could free the adhesions we were compelled to stop, to prevent death on the table. Inasmuch as the patient lived six hours after the operation, I was in error in not having the boldness and determination to go on and finish the work, despite the impending risk. The obstruction I could hardly avoid; but, as we all know, there are very few cases where we can absolutely be certain that death will surely supervene if we do not operate. A cautious prognosis is jumped at by the patient and friends, and one is thus induced to delay till it is too late.

The third death associated with this series occurred in a patient who had a dermoid ovarian on the right side, with a hydrosalpinx wrapped round it. Old adhesions were numerous and plentiful, traces of recent peritonitis as well. I had great difficulty in getting all clear and was compelled to leave a very thick stump.

So great an amount of manipulation was necessary in separating the affected parts that there was considerable rubbing of the peritoneal surface of the intestine, and I noticed numerous punctiform hæmorrhages on some coils of intestine.

Nevertheless, the patient gave no trouble with her immediate recovery; but when the abdomen was opened at the end of the third week, owing to marked symptoms of intestinal obstruction, the intestines and omentum were simply matted together in one mass, just as if the lower part of the abdomen had been filled with cement. Separation of the bowels even in the dead body would have taken hours. An anastomosis was made, but the patient sank and died.

Of these three cases, in the first two I believe that the obstruction was unavoidable, but they died simply because I did not operate sufficiently early. The last death was due to insufficient care in manipulation.

The fourteen cases of tubal disease included seven cases of old standing tubal disease—two of them hydrosalpinx, with a fair amount of adhesion, the other five where the ovaries and tubes were matted together; and in these cases almost invariably was the fimbriated end of the tube fastened down and occluded, no doubt due to the escape of purulent or irritating matter into the peritoneal cavity at different intervals during the past few years. The other seven cases were those in which the tubes varied in size, and were filled with pus, with plenty of recent lymph cementing them to surrounding structures, and at times old adhesions as well. The first seven include among them three of those doubtful cases where the patients are almost incapacitated from work, when the menstrual periods are frequent, painful and profuse, and the patients' lives are miserable.

On examination, it is impossible to ascertain any gross lesion, merely tenderness, and a certain amount of resistance indicative of old peritonitis. Under an anæsthetic, one can be sure that the tube is not specially enlarged; yet there exists a tied-down feeling, and at times a leaning towards and a fixation of the uterus to one side of the pelvis. On opening the abdomen a puckered-up, deeply-injected, broad ligament, tube, &c., is found with the fimbriated end of the tube fast to the bowel, or at the bottom of the pelvis. These are the patients who are often curetted, and surprise the operator by becoming considerably worse than before; and yet by many the very probable benefits following an exploratory laparotomy would be denied the sufferer. Then, again, we may find the same pain as before, and on examination discover a large prolapsed

ovary and very sensitive surroundings. On opening the abdomen, the vessels of the broad ligament are greatly enlarged and varicose, the tubes congested and slightly thickened, and the ovary somewhat enlarged and oedematous, the whole condition very often a marked contrast to the opposite side. Why not remove the affected portion? These cases are not those which can be described as neurotic and neuralgic, and for which operative treatment appears to be worse than useless.

I will now pass on to three cases of ectopic gestation. Two of them occurred at about the eighth week, and were of the same character. Both women fancied that they were pregnant, but had frequent colicky pains, unlike the aches and pains of previous pregnancies. One period was missed, and the rupture took place about the time when the next period was expected. Uterine loss, with severe bearing-down pains, then set in. The visible blood loss was slight, and abdominal tenderness began to manifest itself. I only saw these patients within two and six hours before operation. Then the facial expression of abdominal catastrophe, the feeble small pulse, though only about 110, the tenderness over the lower part of the abdomen, and the softish feeling P.V., left the diagnosis of the case a simple affair. The operative treatment was not difficult, but, owing to the marked prostration, needed to be quickly accomplished. Unfortunately, one of the patients on the fourth day showed symptoms of intestinal obstruction. I opened the abdomen, and discovered a hernia of about 6ft. of small intestine through a slit in the mesentery—an old affair, but, owing to the paresis of the bowel and flatulent distension following on opening of the abdomen, the bowels had jammed fast. I relieved this condition, and, though some flatus was expelled in about twenty hours, not till fifty hours after did the bowels act, and, as often happens, very profusely, so much so that the poor woman, already reduced by the tremendous blood loss, simply sank and died.

No doubt I should have operated much earlier.

The third case of this sort was sent me by Dr. Mills, of Picton, and the diagnosis was a matter of some difficulty. This is the brief history. The last child was seven years old. Eight weeks ago the menstrual period lasted but one day. Five weeks ago a menstrual flow appeared, and on the fourth day was associated with severe colicky pains, vomiting, and a bearing-down sensation.

These attacks of colic, etc., with the loss and increasing pain and tenderness in the left side,

continued up to the time when she first sought medical aid. On his first visit to her, some distance in the country, Dr. Mills imagined it to be a case of abortion, followed by metritis and pelvic peritonitis, but two days afterwards he came to the conclusion which I upheld, and which was demonstrated by the operation. A tubal pregnancy, which had been followed by a gradually-increasing rent in the tube, escape of the ovum, and frequent hæmorrhages.

The omentum and intestines, with the tube, were matted together by means of lymph and blood-clot to the extent of at least a pint and a-half. No great difficulty was experienced, and the woman made a good recovery.

The first two patients were *in extremis* when operated upon, and barely able to stand the anæsthetic. The third was somewhat worn out, but in fair condition.

There were four hysterectomies—two vaginal, one abdomino-vaginal, and one extra-peritoneal. The fatal case I shall speak of first.

It was a case of fibroid disease of the uterus—hard, irregular, and nobby. I first tried to remove the ovaries. The left ovary was found on the right side, closely adherent, with its tube, to the mass. The right could not be found at all, and later on, when the mass was removed, it was discovered flattened out, and attached posteriorly close above the neck of the uterus.

This first operation gave some relief, strange to say, but in six months the patient came back and begged me to remove the whole. I candidly confess I did not like the job, and tried to get out of it. However, so great was her suffering, she preferred to run any risk. I operated first P.V., ligaturing off the broad ligaments as high as I could reach, and then opened the abdomen and worked downwards. What with adhesions to bladder and bowel, the task was extremely difficult, from the cramped position in which ligatures had to be tied, etc. All was removed clear, and the patient stood it well. Here there must have been a great deal of oozing, for which I foolishly made very little provision, only leaving an iodoform gauze drain in the vaginal wound, and which became jammed in such a way by clot during the first night that blood-clot must have become packed up inside, and the patient slipped away on the third day with a slight temperature and a feeble pulse, due, I am sure, to sepsis in a splendid field for the rapid growth of micro-organisms. This same matter of efficient drainage appears to be the trouble with most operators in such cases. Had I another, I should fill up the huge raw cavity with a bag containing strips of iodoform gauze, and protruding from the abdominal wound so as

to soak up blood, etc., rapidly, and leave a gauze drain P.V. as well. Within one or two days almost the whole of it might be removed gradually.

The extra peritoneal treatment of the pedicle in another case was very satisfactory. The tumour, a soft fibroid, was about the size of a child's head, reaching two inches above the umbilicus; ovaries were cystic, and tubes distended with fluid. The operation was simple, and the first dressing of tannin and iodoform left on for five days. Foster was absent, and the stump, with very slight discharge, came off in seventeen days like a piece of hard leather. There was no bladder trouble, and at this time (eighteen months after) the patient's health is good, and she has no trouble whatever.

A vaginal hysterectomy for tubercular disease of uterus and tubes in a girl of nineteen was my first case. In this case hæmorrhage came on the night after the operation, probably due to slipping of a ligature. The abdomen must have filled with blood, and I was afraid to remove the gauze drain lest I should increase or start afresh the hæmorrhage within. Sepsis soon travelled up the saturated vaginal drain, and on the fifth day—though I confess I imagined the case to be hopeless—after opening the abdomen and clearing out the stinking clot, &c., and passing drains right through the abdominal wall and vagina, the patient rallied, and is now quite well, fat, and strong.

I feel convinced that, in working in the peritoneal cavity in particular, it is extremely important to stop all sources of hæmorrhage; or, if oozing of blood or serum be expected, to get rid of it by efficient drainage as soon as possible. For though we do our best to keep our hands, and instruments, and the surroundings of the wound aseptic, I think that it is the wisest to behave as if some micro-organisms had been introduced, and to reduce their opportunities for rapid growth to a minimum.

In the first place, by not irritating the peritoneum, so that its power of resistance may be at its best.

By removing all devitalised tissue, and providing for the frequent and speedy removal of blood and serum, all of which are likely to form a good culture medium for bacteria.

In some four or five of my cases, when a considerable amount of breaking-down of adhesions or removal of blood-clot was necessary, and I avoided using a tube, the healing of the wound would become complete; then, in about a fortnight's time, after a slight rise of temperature, a quantity of broken-down clot and pus would work its way up to the wound, burst through,

discharge for a few days, and then heal up. But this did not take place in a single instance in those cases of a similar character where I used a tube, followed by a gauze drain, for the first two or three days.

I washed out the peritoneal cavity on two or three occasions in the earlier cases. If normal saline solution be used, I should think that probably no harm is done in ordinary cases, but any other fluid would be more likely to do harm than good.

In cases of oozing from raw surfaces, I dare say hot water would be very efficient; but, if hot enough to be efficient, would it not be hot enough to irritate the peritoneum, too?

I found the application of a hot sponge to the raw surface to answer the purpose admirably.

Lately, on three or four occasions when pus from tubes, &c., has been spilled, I have simply caught all that was possible, carefully and gently wiped away the rest, avoiding any displacement of the bowels, and left in a tube. No ill effect has followed at any time. Washing out the peritoneal cavity under these circumstances can only spread abroad the bacteria, and wash away a very small percentage. There is no doubt that the parietic condition of the bowels following abdominal section, which is such a source of trouble by allowing injured peritoneal surfaces to become adherent, and giving rise to intestinal obstruction, is one of our best safeguards in preventing an extension of septic troubles when they do arise, for, by keeping accumulations in the bottom of the pelvis, whence they may be rapidly removed by drainage, depression caused by absorption of nucleo-albumens is avoided, and pabulum for bacteria reaches famine prices.

Another point to be taken into consideration is in the cases of pyosalpinx, for instance. Judging by the adhesions we find, and the way in which the fimbriated end of the tube is glued to neighbouring parts, it is to be inferred that purulent matter escapes now and again, and gives rise to the occasional attacks of pelvic peritonitis. By this means the patient becomes more and more immune, so that during operation, though the pus escapes freely into the pelvis, and is wiped out, if well drained there is no rise of temperature, no constitutional disturbance whatever; previous inoculations, no doubt, to a marked extent acting as deterrents.

My experience of intestinal obstruction has been a sad one. Of the thirty-eight cases operated on for tubal and ovarian disease, the four deaths were all due to intestinal obstruction. One was due to faulty manipulation, the other three to accidental causes. In three of these I operated to relieve the obstruction. In fact, in the six cases

which I have operated on during the last three years for intestinal obstruction, with four deaths, I must make the same lament—that I delayed far too long.

The petitions of the patients' friends to wait have always been too much for me, though, as one gains more confidence in his work, he regards them less.

I speak now of the very acute cases. If, after aperients, two or three preliminary enemata of warm water and turpentine, followed by an enema of olive oil and castor oil, no relief beyond a few scybalæ is obtained, and if (most important of all) I find the patient experiences periodical colicky pains, almost invariably spoken of as a gradual knotting of the bowel, and immediately followed by eructations of wind, with relief of pain, operate at once.

And again, if the latter symptom is not present, some hope of obtaining relief may still be entertained. This pin-stalors to the seat of obstruction, with great, knotting, colicky pain, followed by an anti-pin-stalors and relief as the gas is belched up, is to me an extremely important feature.

The practice of waiting till fæcal vomiting is present, before deciding that the obstruction is complete, is criminal; and operation under such circumstances gives very little chance to the patient. It is extraordinary how rapidly cardiac action becomes enfeebled in cases of intestinal obstruction as soon as the abdomen is opened. Over and over again the pulse has been good and just above 100, and the patient quite bright, but, if the abdomen is not opened and closed in ten or fifteen minutes, the pulse becomes rapid and feeble; and as on one occasion it happened to me I had to stop, lest the patient would die on the table.

I do not wish my record of two recoveries out of six cases, to date, to deter others from operating. One only was a hopeless case; and what I learnt from all the others was to operate still earlier. No cases require greater judgment and greater determination.

I have spoken enough, and perhaps too much, so I will merely add that there remain two cases of frequently recurring appendicitis with removal and recovery, and two cases of tubercular peritonitis, both of the plastic variety, with adherent masses of intestine as well as fluid. Both died at two and three months after operation. I shall never operate on these cases again, if I can ascertain beforehand that there is matting of the intestines; and the same opinion is held by others. The operation should be reserved for cases where there is free fluid, and no matting of intestine.

So that, excluding these two tubercular cases, whose lives, I believe, were prolonged by section, and yet, perhaps, should have been left alone, there remain my first fifty cases of all sorts, with a loss of six—five from intestinal obstruction, and one from sepsis. I have profited greatly by my own blunders. Some of my patients (the earlier cases) gained little, but the majority a great deal. I shall be satisfied if the history of my losses gains for any of you a single recovery.

Dr. THRING said he could not but congratulate Dr. Hinder upon his courage in submitting a list of his failures, as well as his successes, in abdominal surgery. It was by the failures the surgeon learned how to improve his operations, and it would be well if more of the members were to report their failures, so that the mistakes made by one man could be avoided by another. Dr. Hinder had certainly had bad luck in his operations, as he (Dr. Thring) could only remember one case where he was compelled to open up the wound again. He, personally, found the gauze drainage very satisfactory, and could not understand Dr. Hinder's want of success with it. He (Dr. Thring) was not in favour of washing out the peritoneum. In abdominal surgery, there could be no doubt the death-rate with beginners was very high, but as a man became more proficient the operation became less risky.

Dr. WORRALL said some of the cases mentioned by Dr. Hinder were undoubtedly of interest, and the result reflected credit on his management. He felt bound, however, to make one criticism, and that was that fifty cases of abdominal section was a surprisingly large number in so short a time. The paper had set him pondering whether he himself had been unjustifiably cautious, or Dr. Hinder unjustifiably rash. At all events, he was not all convinced that abdominal section was necessary in the cases of oophoro-salpingitis referred to by Dr. Hinder, the tubes being merely thickened and congested with some varicosity of the broad ligament veins. Dr. Hinder had attributed several deaths to intestinal obstruction. He (Dr. Worrall) would be glad to know if this diagnosis had been verified by re-opening the abdomen or by *post mortem* examination, and if so he should like to hear what had been the particular form of obstruction. He believed the symptoms of intestinal obstruction following abdominal section were usually due to what was known as pseudo-iliclus, a paresis of the bowel from septic poisoning, and a condition which was not remediable by re-opening the abdomen.

Dr. HINDER, in reply to Dr. Worrall, begged to state that only four or five, as he signified in his paper, were doubtful cases. These were only operated on after failure of prolonged treatment, and after consultation with his two fellow-workers. Of the five cases of intestinal obstruction, one was an acute case due to a band, and did not follow on previous operations at all. Two others occurred in the third week, and, therefore, could not well be described as pseudo-iliclus, and, besides, the cause was discovered at the time. One other occurred on the fourth day, and was due to hernia of ileum, through a slit in the mesentery. In the fifth case obstruction occurred on the fourth day, and was demonstrated *P.M.* to be due to plastic adhesions kinking and obstructing the intestine at the lower end of the tube track.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting was held in the Austral Salon on Wednesday, April 24th, at 8 p.m. There were present: Dr. Snowball (in the chair), and Drs. Davenport, Mullen, Syme, J. R. M. Thomson, Springthorpe, A. M. Wilkinson, Hamilton, Coane, A. V. Anderson, Sutherland, and Read.

The minutes of the previous meeting were read and confirmed.

Dr. SPRINGTHORPE here read his paper on

A CASE OF ANTHRAX ŒDEMA IN A VICTORIAN STOCK-OWNER.

By J. W. SPRINGTHORPE, M.A., M.D., MELB., M.R.C.P., LOND., PHYSICIAN TO THE MELBOURNE HOSPITAL, AND LECTURER ON THERAPEUTICS, ETC., TO THE MELBOURNE UNIVERSITY.

On January 26th Mr. McL——, of Yea, consulted me about the state of his hand. Seven days previously the point of a syringe with which he was inoculating sheep against anthrax had been driven into his left palm, broken off, and had to be pulled out. He applied a little carbolic ointment, and went on working, feeling only half-an-hour's slight pain. He noticed nothing more for four days, when the hand swelled; the forefinger became stiff. Forty-eight hours' poulticing did no good, so he came to town for further advice.

Questioned, he stated that there had been no vaccine in the syringe at the time, but the point had just been used in a sheep he considered to be suffering from anthrax. His temperature was 101·4°. There was no local pustule, and the condition of the hand was as described below by Dr. Moore. Although the history and the incubation period suggested anthrax, it was impossible to class it as such until I acquainted myself with the form described by Bollinger as anthrax œdema. Believing it probably such, I called in Dr. Moore in consultation. The following morning I examined the blood from Dr. Moore's incision; it was dark, tarry, and did not flow. Under the microscope, it appeared broken down, and, after staining, innumerable bacilli were found in each of three cover-glass preparations, with the characteristics of anthrax bacilli. Energetic local treatment was forthwith adopted, in the manner described by Dr. Moore, with great relief to the pain, and general improvement. Two days later no bacilli were present in the blood from the part, which was, however, still tarry, but a few streptococci were noticed. The blood from the general circulation was then sterile. Improvement continued, and in four or five days the temperature was normal. The local condition, however,

mended but slowly. Of course, towels, sheets, etc., in contact with the cut surfaces were disinfected with boiling water, etc.

Remarks.—The disease, anthrax, is a noteworthy one. According to Whittaker, the bacillus infects chiefly herbivora, next omnivora, least of all, carnivora. Superficial burial of infected carcasses leads to infection of the soil, and the disease spreads chiefly in the warm weather to animals grazing on its surface. It is also transported by streams, floods, etc., but rarely spreads from animal to animal. To man, an internal form is conveyed by eating infected flesh, and is exquisitely infectious and fatal. An external form also may be produced in the presence of an abrasion by contact with diseased animals, skins, hairs, bristles, cloths, horns, hoofs, etc.; or by infected flies, mosquitos, instruments and the like. This external form is at first local, and shows itself by the characteristic pustule, except in the rare cases in which the virus has been introduced deeply into the tissues, and, as Bollinger first pointed out, produces a peculiar œdema. Outside Australia, numerous outbreaks and isolated instances have been reported in the various medical journals.

In Australian stock the disease has been recognised since 1847, having been apparently introduced with sheep from Europe. In 1851, as Mr. Hamlet, Government Analyst of New South Wales, pointed out in an interesting paper before the Intercolonial Medical Congress of 1889, a Sydney Commission reported it identical with the *maladie du sang* of French observers. This was before the disease had been described in England. In 1868 this identity was confirmed by Mr. Gordon (Chief Inspector of Stock in Queensland), and Dr. Morris, of Sydney; and in 1876 by Mr. A. Park, of Tasmania, and Mr. Graham Mitchell, of Victoria. The subsequent discovery of the bacillus, of the protective vaccine, and the demonstrations of the efficiency of the latter in France, Germany, and Australia, will be within the memory of all. Although reliable statistics are perhaps wanting, its prevalence in Australian stock may be fairly judged from the fact that last year hundreds of thousands of sheep were inoculated against the disease. In Riverina it appears to be endemic; in Victoria it seems much less prevalent.

So far, however, as I can gather, this is the first case of anthrax in man reported in Australia. Of anthrax œdema, it is undoubtedly the only case so reported. But there can be little doubt that many such cases have occurred in different parts of the colonies, and have been vaguely described as cases of "blood poisoning." Thus, according to Mr. Cameron, M.R.C.V.S.,

two horses died at the end of 1893 of anthrax, at Mont Albert, after being attended by their owner, a butcher, with several large ulcers on his arm, caused, it was said, by cutting up dead carcasses. Mr. Cameron believes these were really anthracoid, and that the man (who ultimately recovered) infected the horses. Again, Mr. A. D. Ferguson, agent for Gunn's anthrax vaccine, has met with five apparent cases—three in Victoria, and two in New South Wales:—1. A man near Mansfield, with two sores on his hand, skinned an anthrax bullock in January, 1893. Two days later a pustule appeared. His general health has never been good since, and free use of the hand has been possible only within the last month. Dogs and pigs fed on the bullock all died. 2. Another man was poisoned near Whittlesea from the same mob of cattle. 3. A man gathering wool from anthrax animals, near Broadford, ran a thistle from the wool into his thumb. A pustule followed; cured by local applications of carbolic acid. 4. The manager of a station near Coonamble (N.S.W.), after killing some anthrax sheep, died either from a cut or flybite. 5. Another man cut his leg during similar work, and was taken to Sydney to the hospital. He recovered after a very long illness. (Mr. Ferguson also informs me that he has satisfied himself that the milk of a ewe suffering from malignant anthrax does not convey the disease to the sucking lamb.) No doubt these cases are simply typical of a large number; and I am in hopes that this paper will lead to the investigation of many cases of so-called "blood poisoning," and the determination of their identity, or otherwise, with local anthrax. For the diagnosis is not difficult. The period of incubation, the red papule with dark centre, its rapid extension with brawny œdema, the altered condition of the blood, are all very suggestive. The possibility, however, of œdema without pustule, as in the present case, must not be forgotten. Microscopic examination of the blood for the bacilli, or inoculation of some of the blood into a mouse, guinea-pig, or rabbit, soon settles the matter beyond any doubt. And treatment, fortunately, is very successful, if the diagnosis has been made during the period when the disease remains local. (General infection is shown by the presence of the bacilli in the general circulation, and seems invariably fatal.) It consists in free incision, followed by the application of carbolic acid, preferably in concentrated form. By these means the mortality is said to have been reduced from 60 per cent. to 5½ per cent., or even less, fatality being ascribed by good authorities to delay in treatment. The attenuated virus seems useful only as a prophylactic.

One point more. It is stated (*Perroncito*

Gazz. del Ospit., Jan., 1892) that in Italy the districts in which protective vaccination of cattle against anthrax has been extensively adapted are remarkably free from the tubercular disease. If this be true, its importance in the case of the Australian colonies can hardly be over-estimated. Certainly the question deserves settlement, not only for its intrinsic value, but also as part of that still greater question which modern therapeutics will have shortly to face, viz., what influence has preventative inoculation against one species of germ upon the future vulnerability, or otherwise, of the organism to other germs, pathogenic and non-pathogenic?

Dr. Moore reports as follows:—

"When I first saw the patient with Dr. Springthorpe on the evening of January 26, 1895, there was marked swelling of the index finger of the left hand both back and front, of the palm directly above the index and middle fingers, and of the whole of the back of the hand. The swollen parts were hard and brawny—almost absolutely unyielding—to the touch. There was no sign whatever of any point of infection, as indicated by any abrasion, redness or pustule; neither was there any glandular enlargement or tenderness above the elbow or in the axilla. The most tender spot was in the palm, two-thirds of an inch away from the index finger, and there the patient showed the spot where the needle had entered. It was decided to place the hand in a splint, and to dress it with a Boric acid foment.

On the following morning the patient said that his hand had been easier. It was slightly less swollen, but otherwise its appearance was much the same as on the previous night. As the palm was still very painful, tense, and hard, I made an incision deeply into it. Though done without chloroform, he seemed scarcely to feel the knife. Instead of blood flowing freely, as is the case in ordinary inflammatory affections of the palm, the subcutaneous fat bulged into the wound, and then a very small quantity of dark-coloured blood oozed slowly out. The hand was again dressed with a foment, and the splint applied.

In the evening of the same day we found that the hand had been very painful, and the temperature had been up all day. At the back of the index finger over the proximal phalanx there was a gangrenous vesicle about the size of a three-penny-piece. The swelling and hardness of the affected parts were more marked than in the morning, but they had not extended up the forearm. From the patient's general condition, and from the rapid development of the gangrenous vesicle, it was evident that there could be no further delay in adopting energetic local treatment. Dr. Springthorpe therefore administered

chloroform, and I made free and deep incisions into the affected parts. Incisions were made into the soft parts over the proximal and middle phalanges both back and front, the sides of the proximal phalanx, the palm above the index finger, and on the back of the hand above the index. There was very little bleeding, the blood being dark in colour, and not a drop of pus was evacuated. Pure carbolic acid was then rubbed into the incisions, and the hand was dressed in the same way as before.

For the next four days the hand was dressed twice daily; subsequently once a day for several weeks. The pain was at once greatly relieved; the swelling subsided very slowly; there was no discharge of pus from any of the wounds for several weeks; there was considerable destruction of the soft parts at the site of the gangrenous vesicle; all the incisions except those in the palm and at the site of the vesicle healed rapidly, but some pus subsequently developed under the incisions on the palmar surface of the index finger. The cavity produced by the loss of tissue on the dorsal surface of the finger gradually filled up, and was perfectly healed within five weeks from the time of incision. The opening in the palm never secreted ordinary pus; the discharge always appeared to consist of the subcutaneous fat partly dissolved. This wound was just closed when the patient was last seen on March 4th. At that time one of the incisions on the palmar surface of the finger, which had been re-opened because of a superficial collection of pus, was the only wound unhealed. Subsequently the patient reported that there was a small collection of matter under the other incision on the palmar surface of the finger. They were both quite superficial, and gave scarcely any trouble. The index finger remained a little swollen; the remainder of the hand was normal in appearance, and the movements of the thumb and other fingers were fair.

In its appearance from the first the hand was quite unlike the ordinary inflamed or cellulitic hand, and the whole course of the affection as equally dissimilar. The hardness and brawny, board-like feel, and the absence of redness, were quite different from the septic inflammations of the hand that were formerly so common, and that are still occasionally met with, in hospital out-patient rooms. Further, there was no point of suppuration at the start, and no pus found for several weeks in any of the wounds made; the swelling did not spread up the forearm, and there was no lymphatic involvement.

DR. THOMSON dwelt upon the importance of the subject. Some months ago he had lost a friend, whose case he now suspected had been one of anthrax. As against

burial of infected stock, he reminded members of Pasteur's proof that continued infection of the soil might be brought about by the action of earth-worms.

DR. DAVENPORT wished to have the essential question of diagnosis amplified. How could one be certain he was dealing with a case of anthrax?

DR. HAMILTON desired an explanation of the apparent contradiction between the absence of pus for many weeks in this case and the presence of a pustule from the start in other cases. The suggested antagonism between anthrax vaccine and tuberculosis was a most important matter, and its testing on guinea-pigs should be attempted. Certainly, one symptomatic disease did not protect against another.

DR. SPRINGTHORPE thanked members for their interest and remarks. The case mentioned by Dr. Thomson, and diagnosed, he believed, in the latter stage, as acute pemphigus, was probably one of anthrax, but the question could not now be definitely settled. As regards diagnosis, probably the careful reading of the paper would give full details. Apart, however, from the suspicious history and somewhat characteristic appearance, a drop of the blood, stained with any of the usual stains, and examined with a one-eighth or one-twelfth inch oil immersion, shows not only the degeneration of the blood-cells, but the characteristic bacilli, excellent representations of which appeared in Fraenkel and Pfeiffer's Atlas (sent round for illustration). Inoculation of mice, rabbits, or guinea-pigs with a drop of infected blood kills the animals in twenty-four hours—the blood swarming with bacilli. The contradiction mentioned by Dr. Hamilton was only apparent. There was no pustule when the virus was deeply injected. He would see if something could not be done by way of experiment, as suggested.

DR. SYME then read his paper,

FURTHER NOTES ON RENAL SURGERY.

By G. A. SYME, M.S., M.B., MELB., F.R.C.S., ENG.; DEMONSTRATOR OF ANATOMY, MELBOURNE UNIVERSITY; SURGEON TO ST. VINCENT'S HOSPITAL, TO OUT PATIENTS, MELBOURNE HOSPITAL, AND TO THE VICTORIAN POLICE HOSPITAL, &c.

THE pathogeny of neoplasms in general, and of carcinoma in particular, is one of the most engrossing problems of the present time; and even individual cases are of interest, if they throw merely a side-light on the questions at issue. The essence of the neoplastic process is admittedly an unduly rapid and unrestrained multiplication and growth of cells; and the question to be settled is—Does this process originate in the cells, owing to a failure of the integrative force that normally regulates and restrains their activity, or does it originate *ab extra* by the action of what are termed irritants; and, if so, can any irritant originate the process, or must it be a specific microbe?

It would be out of place to discuss these questions now. All I wish to observe is that if long-continued, non-specific irritation is an essential factor in cancer formation, one would

expect that renal and vesical calculus would frequently induce carcinoma of the kidney and bladder respectively. The case I am going to record induced me to make considerable, though, from want of time and opportunity, by no means an exhaustive, search through the literature of the subject, and it would appear that such sequence is not at all frequent. Indeed, it does not occur more often than would be accounted for by mere coincidence; and, so far, this fact may be regarded as one argument against the Broussaian doctrine of irritation pure and simple. It must be remembered, on the other hand, that in the case of the kidney, at all events, the epithelial cells concerned are highly specialised, and that in proportion to their degree of specialisation is the power of reproduction of cells deficient, and the less likely are they to form neoplasms, and also that both vesical and renal calculi are generally removed by operation, before time perhaps is given for cancer formation to set in. However, I do not wish to say more on this vexed problem of malignant pathogeny, but simply to place on record an instance of this occurrence of renal carcinoma subsequent to renal calculus. If all cases are recorded, it may prove to be more frequent than at present appears.

CASE I. — RENAL CALCULUS. NEPHRO-LITHOTOMY, SUBSEQUENT NEPHRECTOMY FOR CARCINOMA OF THE KIDNEY.

Winifred M., *æt.* fifty-one, married, was admitted to St. Vincent's Hospital, on March 15, 1894, complaining of pain in the left side of the abdomen, where she had a swelling. She stated that when twenty-five years old she first had attacks of severe pain in the left loin, accompanied by vomiting, and lasting about a day. The attacks varied in frequency. Sometimes three or four in a year, and sometimes she was free for years. She has never passed blood or gravel in the urine. Sometimes after an attack she passed a larger quantity of water than usual. As a rule, she passed water three or four times a day, and usually little at a time. For some years she has had to get up in the middle of the night, and then passed a larger quantity. She has been gradually losing flesh for about a year, and has suffered much from indigestion and sleeplessness, with pain in the swelling, which she first noticed in January, 1894, and which has been rapidly increasing.

Her father died of dropsy at the age of forty-five, and her mother of senile decay at eighty-four. A brother died after an operation for a growth of unknown nature at the age of 34. On examination, the patient was much emaciated,

and had an anxious expression. In the left hypochondriac region was an irregular, hard swelling, extending forward nearly to the mid-line, and backward to the loin. It was slightly movable, and very tender. It did not move much with respiration. The other organs were natural. Urine, sp. gr. 1009, slightly acid, light-coloured, turbid, depositing a white sediment, which did not clear with boiling or adding nitric acid, and contained one-sixth albumen. Under the microscope, it contained pus cells and blood corpuscles; 48 ozs. passed in 24 hours.

Operation, 22nd March.—Incision five inches long parallel to last rib; tumour exposed, and found to be the kidney much dilated. Incised *in situ*, and a quantity of pus and urine evacuated. A branched calculus was felt, blocking the renal pelvis, and was extracted in three pieces. A rubber drainage-tube was passed into the kidney, and the wound closed, after thoroughly irrigating the sac and wound with a solution of boric acid. Considerable oozing of a sero-sanguinolent character occurred for twenty-four hours, and the patient had a good deal of shock. The next day she had rallied well, urine was passing from the wound, and the oozing had ceased.

March 23rd.—Only 12 ozs. of urine passed by urethra in last twenty-four hours, which was acid, sp. gr. 1030, and free from albumen. Dressings and bed soaked with urine from the wound.

From this on the amount of urine naturally passed increased, and that through the wound diminished, but the discharge from the wound became purulent, the tumour increased instead of diminishing, and she gradually wasted and lost ground. Accordingly, on the 31st May, it was decided to perform nephrectomy, which was done by opening and enlarging forwards the original incision. The kidney and ureter were very adherent, and the lower portion of the kidney was occupied by a malignant growth which had infiltrated the surrounding tissues and overlying peritoneum, and surrounded the renal vessels and ureter. It was freed with considerable difficulty, and the patient became very collapsed. Her head was lowered, and stimulant enemata given, and the renal vessels and ureter were rapidly ligatured, and the kidney and growth removed. The shock was severe, and the patient never rallied, dying the same evening.

Dr. Stawell, pathologist to the Hospital, reported that the other kidney was natural, the growth completely removed, and that the lower portion of the removed kidney was occupied by a growth which, on microscopical examination,

was found to be carcinoma. (The specimen was shown at the last meeting of the Branch).

In February, 1894, I read a paper on renal surgery before this Branch, and in the discussion which followed Dr. Gardner mentioned a case in which he had performed nephro-lithotomy, with a fatal result, caused by hæmorrhage—the kidney proving to be the seat of carcinoma. In addition to this case, I have been able to find records of four similar cases. Dr. Habershon records one (Guy's Hospital Rep., ser. iii., vol. xi., p. 203). The patient was aged sixty-six. At the age of thirteen he began to have symptoms of renal calculus, which continued until he was 30. He was then free from trouble till the age of 44, when symptoms of pyelitis set in, and finally a tumour developed, and he died. *Post Mortem*.—The kidney was pyonephrotic, the pelvis blocked with a calculus, and the tumour was due to the development of carcinoma. The second case is described by Dr. S. Coupland (Trans. Path. Soc., vol. xxxiii., p. 219) as a kidney containing several calculi in its pelvis and calyces, and also carcinomatous. Mr. Bernard Pitts narrates the history of a third case (St. Thomas' Hosp. Rep., vol. xx., p. 244) in which nephro-lithotomy was performed for renal calculus, which had produced symptoms for four years, and the patient subsequently died from carcinoma of the same kidney. I find, also, though unable to refer to the original paper, that Dr. Papavoin contributed (to the Clin. d'Hop., Paris, for 1829) "*Observations de cancer du rein gauche, déterminé par la formation d'un calcul dans cet organe.*"

During the discussion on my previous paper, several speakers objected to the plan of turning the kidney out on to the loin, as recommended by Mr. Henry Morris, and which I strongly advocated. In this case, perhaps under the influence of these criticisms, and also because the organ was pyonephrotic and adherent, I incised *in situ*. Had I, however, turned it out, I should have discovered its malignant condition, and removed it there and then, and, I think, probably with more success than attended the subsequent nephrectomy, when the growth was much larger, and more adherent and infiltrated, and the patient much weaker and very despondent at having to undergo a second operation.

The second case is one of

NEPHRECTOMY FOR TUBERCULAR KIDNEY, for the notes of which I am indebted to Dr. S. D. Read, Resident Medical Officer to St. Vincent's Hospital.

Miss F. D., æt. twenty-three, was admitted to St. Vincent's Hospital, December 21, 1894, complaining of a swelling in the left side of the

abdomen. She stated that she had always been delicate, and about seven months before admission noticed pain in the small of the back. A month later she had an attack of pleurisy in the left side, and a lump developed in the left side under the ribs. This had rapidly increased and become painful. She had had no increased frequency of micturition. She had lost flesh, and for a time had some swelling of the feet, more especially the left. The catamenia ceased a year before. Her mother died of phthisis. Her father is dead, but the cause she did not know. All her brothers and sisters are healthy and living, except two who died in infancy.

On examination, patient was anæmic. Hands thin, and fingers slightly clubbed. In the left hypochondrium and lumbar region was a tumour extending upwards to above the level of the umbilicus, downwards to 1½ in. from Poupart's ligament, forwards to the midline, and backwards to the loin. It did not move with respiration, and felt tense and elastic. It was tender on manipulation. Over the left lung the percussion note was dull laterally, and the breath-sounds indistinct. The urine was light-coloured, with a whitish deposit miscible with the fluid; sp. gr. 1020. It contained albumen, and under the microscope pus and blood corpuscles were found, and tubercle bacilli in large numbers. The patient was kept under observation for three weeks, during which time the tumour increased, and became more distinctly fluctuant. The temperature was very irregular, rising as high as 105·6° F. for perhaps two hours, and then falling to normal. The rise was not at any definite time, and not always in the afternoon.

A diagnosis of tubercular kidney was made, and nephrectomy decided on after consultation. The operation was performed on 16th January, 1895. Strychnine (gr. 1·60th) was injected hypodermically the preceding day, and on the morning of the operation; chloroform alternately with ether was used as the anæsthetic. An incision four and a-half inches long was made, parallel to the last rib, and down to the kidney. The organ was found to be very adherent, and the incision was enlarged forwards. The adhesions were freed with the fingers, and the kidney turned out on to the loin. The ureter and renal vessels were ligatured separately with silk, and the kidney removed. The supra-renal capsule was torn through, and bled freely. It was then removed, and its vessels ligatured. The peritoneum was also accidentally opened, and the wound in it closed with catgut sutures. A rubber drainage-tube was inserted, and the wound closed. The patient rallied well from the operation, and, except for some stitch-

abscesses, made a good recovery. During the first forty hours only 22 ozs. of urine were passed, or, rather, drawn off with a catheter. During the next thirty-six hours 20 ozs. were passed voluntarily. She gradually picked up strength, sat up on the 1st February, and was discharged on the 6th March, having gained flesh, and being free from symptoms.

(The specimen was shown at the last meeting of the Branch).

Difference of opinion still appears to exist as to the propriety of removing a tubercular kidney, and it is laid down as a rule that nephrectomy should not be done unless it is certain that the other kidney is unaffected. How this is to be ascertained beforehand is not so clear, for the kidney may be tuberculous long before it is enlarged or causes bacilluria. I am afraid, in the case reported, it is very probable the other kidney is affected, but the improvement in the patient's condition since the operation is so striking as to thoroughly justify its performance. Before operation, she was a miserable, wasted creature, in constant pain, with no appetite, and a high temperature. Now, although she has a little pus in the urine at times, but no tubercle bacilli, and occasionally a slight rise of temperature, and probably some tubercular cystitis is commencing, or the other kidney is getting worse, yet she is happy and cheerful, has no pain, or even discomfort, eats and sleeps well, and has become so rosy-cheeked and stout as to be hardly recognisable as the same woman.

The extent to which movable kidney causes symptoms is still a disputed point, and the following case, while interesting in itself, has some bearing on the question.

CASE III.—PERINEPHRITIC ABSCESS AND MOVABLE KIDNEY.

Mrs F., *et. twenty-two*, was first seen in consultation with Dr. Dyring on June 25, 1894. She complained of pain in the right side of the abdomen and in the right lumbar region, extending down the front of the right thigh, and causing her to limp. She began to limp six months previously, and had noticed the pain for about four months. She had lost flesh considerably, but had no other symptoms. She had had no symptoms of renal colic, and had always been healthy. Micturition was natural. On examination, she had marked lateral curvature of the spine, but there was no rigidity, no pain in moving the spine, and no evidence of caries. The movements of the hip were free and painless, but full extension produced lordosis. There was a distinct tumour in the right hypochondrium, which could be pushed upwards and backwards, and felt like a movable kidney, but

could not be replaced altogether. There also seemed some fullness in the loin. The temperature was normal, and the urine of a sp. gr. 1020, and free from albumen. The uterus and adnexa appeared normal. A diagnosis was made of movable kidney, complicated with something else, the nature of which was obscure, and it was decided to await further developments. The possibilities of sarcoma, of tubercular kidney, of perinephritic abscess, and of spinal abscess were carefully considered. As the pain increased, and she was evidently getting worse, she was admitted to the Melbourne Hospital on the 22nd of July. The swelling in the lumbar region was more evident, and it was found she had an irregular rise of temperature. Dr. Mollison examined the urine carefully under the microscope, and reported that it contained some pus cells, but no tubercle-bacilli. A diagnosis of perinephritic abscess was made, and proved to be correct, when a lumbar incision was made, and a large quantity of odourless pus evacuated. The kidney was then easily pushed into place, and appeared normal to the exploring finger. The cavity gradually closed, and she made an excellent recovery, gaining flesh rapidly.

In this case the mobility and displacement of the kidney were evidently due to its being pushed forward by the accumulation of pus behind it, which burrowed down towards the pelvis and pressed on the lumbar plexus. The cause of the abscess remains obscure; the urine has been perfectly normal and free from pus ever since the operation, and she has had no symptoms, though the kidney is still movable and generally displaced. In this the interest of the case lies, the mobility and the symptoms being the result of a common cause, and it is possible that in many cases of movable kidney with symptoms, these are not due to the mobility of the kidney, but to some other condition which is not so obvious.

DR. SPRINGTHORPE had recently seen the girl from whom the tubercular kidney had been removed. She was apparently in excellent health. He would like to know if Dr. Syme attached much weight to movements of the kidney, and, if so, why he had not anchored the kidney in his last case.

The PRESIDENT always regarded movement as secondary to something else. After systematic examination, he had never seen a congenital case in children. He remembered a case, in a young child, due to the pressure of a spinal abscess. He thought Dr. Syme right in not attempting anchorage in this case.

Dr. SYME had not anchored the kidney because there were no indications, and it would have been risky in dealing with a large suppurating cavity. He thought many of the dyspeptic and neurotic symptoms so often described had really nothing to do with movements of the kidney. The symptoms continued even after the kidney was fixed. He had, however, operated when

there was hydro-nephrosis, profound disorganisation and acute pain. The results given in a recent article by Mr. Bruce Clarke in the *British Medical Journal* in his opinion told strongly against that writer's contentions.

Dr. COANE then moved the adjournment of the meeting, as follows:—

"Mr. President and Gentlemen,—I desire to move the adjournment of the meeting, and in doing so would like to make a few remarks in connection with a subject which ought to be interesting to most of us, viz., the increasing distaste of the public to pay for medical advice, and the pretexes devised in order to get out of liabilities to medical men. Is it the advance made in the study of bacteriology, and the belief that all diseases are due to microbes, which causes people to think that the killing of such insignificant little beggars isn't worth paying for? It may be said that we have the law at our own disposal to enforce payment, but most of you know what this means—in nine cases out of ten, throwing good money after bad. After a long attendance on a married woman, and having furnished the account to her husband, we find, perhaps, that everything belongs to her, and that we are barred by rendering the account to him. Nobody owns anything, and everything that appears to belong to him or her belongs to someone else. Under our Victorian laws, I believe that, in the event of a debtor not being able to find one of the human species to claim for the time his money, goods, and chattels, it would be possible, with the aid of a clever solicitor, to prove that they belonged to a deceased grandmother's Tom cat. Last year I attended a case which I may mention was one of typhoid fever, at a dairy, and, on putting the law into motion to recover my fees, I discovered that everything—cows, horses, pigs, &c.—belonged to the apparent owner's wife's aunt, and probably that lady appeared on the scene later on to claim the few microbes which might have escaped the ruthless destruction of the health authorities. This is only one of many instances of a similar nature which all of us have experienced. I now come to deal with a matter which has occurred to me within the last few weeks, and is, I think, one of special hardship. The estate of a deceased gentleman, a patient of mine, was placed in the hands of a trustee association for administration, and subsequently declared insolvent by that institution, their manager being appointed trustee. Although my claim was before them for six months, no objection was raised, but after insolvency my proof of debt was objected to—first, on the grounds that I attended "as a friend;" second, that the amount paid on account discharged my debt; third, that my fees were too high. The other creditors were a brother practitioner, several banks, and Goldsborough, Mort and Co., whose claims were admitted not only for the called capital, but practically for the whole of the uncalled capital on their shares. The other medical man and myself were the only really genuine creditors. I may state that the insolvency was voluntary and unnecessary, and will simply ruin an otherwise quite solvent estate. As there seems to be a probability of our insolvency laws being altered, I would suggest that this and kindred societies should take some action to have our claims made preferential. I have now, unfortunately, to fight for a small dividend in an estate almost swamped with law costs, and the company, as trustee, paying its own expenses out of the assets. The case will be heard before Judge Molesworth in a few weeks, and will be one of great interest to the profession generally. Apologising for taking up so much of your time, and thanking you for your

patient hearing, I beg to move the adjournment of the meeting.

Dr. MULLEN seconded the motion. Dr. Coane had been hardly treated, but he should months ago have joined the Medical Defence Association. He agreed that it would be desirable, if the opportunity offered, to attempt to get medical, like legal, fees made preferential.

Dr. SYME agreed. He spoke feelingly, as a personal sufferer. The profession was not sufficiently united. He hoped the council, or a sub-committee, would take up the matter.

The meeting then adjourned.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE monthly meeting of the above was held at the Adelaide Hospital on the 25th April, 1895. Present:—Professor Watson, Drs. T. K. Hamilton, Clindening, J. A. G. Hamilton, A. A. Hamilton, Teichelman, Cudmore, Stewart, Symons, Todd, Archer, W. A. Verco, Goldsmith, C. Magarey, Fischer, Lendon, Hayward, Poulton, and Marten.

Dr. Swift apologised for his unavoidable absence.

On the proposition of Dr. Clindening, seconded by Dr. J. A. G. Hamilton, the minutes of the last meeting were taken as read.

Dr. T. K. Hamilton showed a case of Pachydermia Laryngis, with a well-marked "singer's nodule" on the right cord.

Dr. Lendon showed a child who had been subjected to various operations for the relief of congenital talipes equino-varus. Before the patient was sent into the Adelaide Children's Hospital an attempt had been made to rectify the deformity by means of tenotomy, plaster of Paris, and splints. When twelve months of age, and before the child had attempted to walk, tarsectomy was performed, with the result that eight months later he was able to walk on the outer edge of his foot, instead of on the dorsal surface of the foot. Next, syndemotomy (Parker's operation) was tried. Finally, a year after tarsectomy, the tibia was divided about its middle, and the foot erected. This has greatly improved the child's mode of walking.

Dr. Lendon also showed (for Dr. Wigg) a boy with cyanosis, due to congenital defect of the heart.

Dr. Hayward read his paper. Discussed by Dr. A. A. Hamilton.

Dr. Lendon read his paper, which was discussed by Dr. J. A. G. Hamilton, Dr. Hayward, and Dr. A. A. Hamilton.

Dr. W. A. Verco read his paper, which was discussed by Drs. Hayward, Lendon, J. A. G. Hamilton, A. A. Hamilton, T. K. Hamilton, and Dr. Verco replied.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

BY W. T. HAYWARD, L.R.C.P.S., ETC.,
PHYSICIAN TO THE ADELAIDE HOSPITAL,
LECTURER ON CLINICAL MEDICINE, ADELAIDE UNIVERSITY.

THE following are the brief notes of a case whose death I certified to have been caused by "acute yellow atrophy of the liver."

Mrs. H., aged 21; married about a year. Rather diminutive in size; bright and cheerful

disposition; nervous temperament; family history good; had always enjoyed good health, with the exception that she suffered rather severely from headaches, chiefly at menstrual periods. These had abated in severity since her marriage. During the early stages of pregnancy, vomiting was more than usually severe, and during the later months there was some cedema of feet and legs; during the final month she complained of feeling tired, and that her feet ached a good deal. She was cheerful throughout; apparently had no inordinate fear as to the result of her confinement. The urine was examined, and no albumen found. Delivery took place on February 27th, 1894, at 4 p.m., labour having lasted about thirty hours, the pains having been very frequent and severe. Chloral was given during the early stages; delivery was completed under the influence of chloroform, forceps being used; presentation was normal. The perineum was slightly torn, but repaired immediately. I noticed at the time that the patient felt hotter than is usual, and that the pulse was quick; after delivery, and though the uterus contracted fairly well, it kept up to 120 a minute. She expressed herself as feeling quite well and comfortable after the effects of the chloroform had passed off.

February 28th.—Fairly comfortable till early this morning, when she began to suffer from distension of the bladder. A pint and a-half of highly-coloured urine was drawn off, and the discomfort ceased. No tenderness or distension of abdomen. T. 101°, P. 120.

Evening.—Urine again withdrawn; slight tenderness over upper part of abdomen. No headache, no shivering; temp. 101.4°, pulse 126.

March 1st.—Had a severe pain in abdomen during night, which lasted about an hour—15 min. of liq. morph. acet. were given; a fair-sized clot came away, and there was no necessity for a second dose of medicine. Says she is very well. Noticed that she appears somewhat sallow. Temp. 102°, Pulse 120.

Evening.—With the exception that the pulse and temperature are still raised, and that she talks in her sleep, she appears to be well.

March 2nd.—Condition remained as above noted till 4 a.m., when the nurse noticed that the patient was getting "a bit mixed" when talking. She asked for some milk and a biscuit; shortly afterwards she was seen to be trying to drink out of an empty plate. Stupor gradually supervened, and it was with difficulty that she was roused two hours later. When seen at 10 a.m. her condition was as follows:—Skin and conjunctivæ distinctly jaundiced; unconscious, but can be slightly roused; restless; pupils semi-dilated, but re-act to light;

will not or cannot swallow—screams when feeding cup is placed to her lips; allows fluid to trickle out of her mouth; temp. 99°, pulse 90, feeble; lungs and heart normal; abdomen not distended, flinches when the region of the liver is palpated, no sign of tenderness elsewhere; hepatic dulness greatly diminished in extent. Twelve ounces of urine withdrawn by catheter; that first passed was clear and dark-coloured, the last was thick with a granular deposit; on examination, it was acid, contained a slight amount of albumen, and showed the reaction for bile. A large quantity of a pinkish-white material was deposited on standing; this, under the microscope, proved to be amorphous urates, with crystals of triple phosphate, aggregated in places in the form of straight-convoluted casts; a few bunches of squamous epithelium and one globule that may have been leucin were observed. No pus nor blood cells were present.

Evening.—Dr. Verco saw the patient with me; she was comatose, pupils semi-dilated. Temp. 101.2°, pulse 138. Hepatic dulness one finger's breadth only.

March 3rd.—Comatose condition; breathing rapid and stertorous; jaundice very marked. Patient died at 2.30 p.m. No *post-mortem* examination obtained.

Remarks.—I freely admit that in this case there are several symptoms absent that prevent it from being looked upon as a typical one of acute yellow atrophy of the liver, and which might even raise a doubt as to the accuracy of the diagnosis. The question that presented itself to my mind was whether the symptoms pointed to it being a case of acute yellow atrophy, or one of uræmia; several would apply to either. The following points decided me in favour of the former:—The rise of temperature; quickened pulse before the appearance of the cerebral symptoms; the free secretion of urine, containing only a slight amount of albumen, with the presence of bile; the evidence of tenderness over the hepatic area, with absence of it elsewhere; the gradually increasing jaundice; and lastly, the great diminution of the hepatic dulness, while there was no abdominal distension to mask it. The presence of leucin in the urine was too doubtful to place reliance on it as a symptom. The absence of vomiting, and the passage of black stools, was against the diagnosis; but I remembered that in the only other case of this disease that I had seen these symptoms did not occur until the patient was almost moribund. I dare say had my patient lived a little longer they would have been present. I regret extremely that I was unable to obtain a *post-mortem* exami-

nation, which alone could have confirmed or upset the diagnosis.

An interesting point in connection with this disease is whether or not recovery ever takes place. Dr. Hardie, in an interesting paper in the *Australasian Medical Gazette* of May 1890, wherein he relates a series of cases, says that "he cannot imagine it possible for a patient to recover;" on the other hand, Drs. Creed and Scot Skirving record two cases, and Dr. Mueller one, all of which recovered. Doubtless many members remember an able and interesting, though somewhat acrimonious, correspondence on the subject between Dr. Hardie and Dr. Mueller. I have carefully re-read the discussion, and the cases that gave rise to it. I confess that I cannot get away from the feeling that the cases were those of true acute yellow atrophy. Dr. Mueller's pathology rather staggers me, but his clinical record seems fairly conclusive. It is certainly strange that, in a disease so almost universally fatal, these gentlemen should have three consecutive favorable results; but it is not more strange than that in the course of eight months Dr. Hardie should have five undoubted cases of a disease so rare that it is almost the exception for a medical practitioner to have come across one. In Fagge's "System of Medicine" it is stated that in acute yellow atrophy the whole of the liver is not involved at once, and cases are recorded in which the patient died after a second attack. May not this explain the successful causes? Is it not possible that in these cases only a part of the liver was involved at the onset, and that either nature of treatment arrested the disease?

SUPPURATIVE PYLEPHLEBITIS.— SECONDARY TO SUPPURATION IN THE FIBROUS SAC OF AN ECHIN- OCOCCUS CYST OF THE LIVER.

BY ALFRED AUSTIN LENDON, M.D. (LOND.),
LECTURER ON FORENSIC MEDICINE AND ON
CLINICAL MEDICINE, IN THE UNIVERSITY
OF ADELAIDE.

Mrs. W., *æt.* 50, was admitted into the Hope ward of the Adelaide Hospital October 9th, 1893, and died on October 13th.

As I did not see this patient during her lifetime, it is only necessary to state that she had jaundice and abdominal distension of a few days' duration, with increase of hepatic dulness, that symptoms of collapse supervened a few hours before her death, and that Dr. Cavanagh-Mainwaring, the then house physician, suspected both the hydatid disease and the perforative peritonitis which were found at the autopsy.

Post Mortem Examination.—The body was

distinctly, though not intensely, jaundiced. The abdomen was especially distended in the upper and front part, where it was dull on percussion, whereas in the flanks it was resonant. On opening the abdominal cavity, a considerable quantity of serum escaped, which was bile-stained and turbid with flakes of lymph; the great omentum was attached by a narrow band of adhesion to something in the pelvis; there was evidence of recent peritonitis about the transverse colon and stomach; and on tearing apart some soft adhesions pus welled out from a small aperture, and a daughter-cyst followed. The thoracic and abdominal viscera were then all removed *en masse*, much purulent fluid escaping meanwhile, together with numerous daughter-cysts filled with clear or bile-tinted fluid. The fibrous sac of the hydatid projected from the under-surface of the right lobe, and involved the anterior half of this lobe, there being but a very thin layer of liver tissue between the sac and the convex surface of the organ. In the liver itself, the fibrous sac was but ill-defined, being replaced for the most part by a granulating surface; but beyond the limits of the liver it was strong, and inseparably attached to the gall-bladder, and also adherent to the lesser omentum. The sac, which was about the size of a child's air-ball, contained, besides the pus and the daughter-cysts, the gelatinous, bile-stained remains of the mother-hydatid; there was a cleanly punched-out perforation of the sac into the peritoneal cavity above the cardiac end of the stomach, and under the left lobe of the liver. The perforation was not quite as large as a threepenny piece, and its edges were hæmorrhagic. An ulceration also was found, which was threatening to perforate the gall-bladder.

The liver itself was fibro-fatty, coarsely granular on its surface, yellowish-brown in colour; the thick posterior edge of the right lobe contained a wedge-shaped portion, having a superficies of about three inches square, which on section showed congeries of large and small abscesses, some of which slightly projected on the surface of the organ. The whole bore a close resemblance to a section of a lung in the condition of advanced phthisical consolidation studded with numerous vomiceæ. This abscess patch converged from the surface of the liver towards a large branch of the portal vein, which opened on to the granulating surface of the sac of the hydatid, the vein itself being full of pus. Another, though much smaller patch, was found near the anterior edge of the liver. The gall-bladder contained no pus, but was full of bile. In the cystic duct some small calculi were found, but there was no actual obstruction of this or of the choledochus.

In the pelvis attached to the right side of the bladder was a small cyst, to which the omentum was adherent, as before described. It had undergone retrogressive changes, and contained a mother-cyst with daughter-cysts, and much pulaceous cement. Its capsule was very thick, and altogether it was as large as a tennis ball.

No abscesses were found in any of the viscera except the liver.

The sequence of events in this case probably was as follows:—A hydatid developed in the right lobe of the liver, and in the course of its growth the adventitious sac became adherent to, or incorporated with, the gall-bladder, a large branch of the portal vein and the lesser omentum. Rupture of the mother-cyst occurred, and either before or after this event bile escaped into the cavity of the fibrous sac. Next, suppuration took place, and sloughing of portions of the fibrous sac ensued; so that in one situation perforation was threatening, and in another it actually caused death. The suppuration further set up adhesive phlebitis and thrombosis of this large branch of the portal vein; ulceration or sloughing of the sac then caused perforation of its coats, and the thrombus liquefied into pus, which penetrated to its peripheral branches.

Suppurative pylephlebitis or portal pyæmia is a rare disease, and almost always a consecutive lesion. As a consequence of suppuration within the liver, it is said to be much rarer than suppuration within the branches of the hepatic veins which usually leads to general pyæmia. As a complication of suppurating hydatids of the liver, it is still more rare; indeed, I have not been able to find the record of such a case.

PROCEEDINGS OF OTHER SOCIETIES.

THE WESTERN MEDICAL ASSOCIATION OF SYDNEY.

A GENERAL meeting of the Western Medical Association was held at the Town Hall, Petersham, on March 7, 1895. Present:—Dr. McNeill (President), Dr. McAllister, Frizell, Reading, Patrick, Chenhall, Peare, Hinder, Jones, Blackwood, Maguire, Coutie, Knaggs, Hall, and Wood, together with Messrs. Wale and Aspray. The following were elected officers for the ensuing year:—

President: Dr. P. M. Wood. Vice-Presidents: Drs. McAllister and Dr. Maguire. Secretaries: Dr. Coutie, and Dr. Abbott. Treasurer: Dr. Blackwood. Council: Drs. Kirkland, Purser, McNeill and Hinder. Auditors: Dr. Peare and Dr. Kendall. Dr. MacSwinney and Dr. Coutie were nominated by the Association to represent the Western Suburban Districts on the council of the B.M.A.

The rest of the evening was spent in a social manner, Drs. Knaggs, Maguire, and Messrs. Wale and Aspray kindly assisting to make it pass pleasantly.

MEDICAL SOCIETY OF QUEENSLAND.

THE 100th general meeting of the Queensland Medical Society was held on April 9th, 1895, in the Society's Rooms, Brisbane. Present:—Dr. Hill (President), Drs. Little, Gibson, Wheeler, Love, Ashworth, Taylor, Lillian Cooper, Ure, Lawes, Bancroft, Turner, Smith, Thomson, Comyn, Byrne, and Hardie. Visitors:—Drs. Connolly and Lyons, and Mr. Pound.

Dr. LOVE showed cultivations and microscopical preparations of bacillus diphtheriæ, and micrococcus tetragonus isolated from diphtheritic membrane.

DR. TURNER read his paper on "The Place of Bacteriology in Practical Medicine."

THE PLACE OF BACTERIOLOGY IN PRACTICAL MEDICINE.

[READ BEFORE THE QUEENSLAND MEDICAL SOCIETY ON APRIL 9th, 1895.]

A. JEFFERIS TURNER, M.D., LOND., BRISBANE.

FROM time to time one of the members of our society, impelled by various motives, resolves upon a visit to Europe. It is customary, I believe, on his return, to require him to give some account of himself before his fellow-members—to impart something of what he has heard and seen while moving among larger circles of medical science. The custom is, I think, a salutary one, if only for this reason—that the prospect of it serves to remind the traveller that a visit to Europe should be something more than a pleasure trip. I do not myself feel open to any reproach on this score; but there is yet a reason why I find it very difficult to write a paper to satisfy your very reasonable desire to hear of the latest "new things" from Europe. It is that I feel now more than ever that real and practical knowledge of the clinical aspect of disease can only be acquired in one way—by patient and continuous work at the bedside, or operating table, or in the consulting room on one's own patients. This alone qualifies one to speak to his fellows out of his own knowledge, and not as a mere needless echo of the opinions of others, however eminent—opinions which we are all capable of reading for ourselves. Not that I would undervalue what I have learnt during the last twelve months; indeed, I rate it very highly for my own personal use. New methods of diagnosis and treatment, hints and suggestions for verification in one's subsequent work—all these can be acquired better by actually seeing than by simply reading of them. But until one has proved them for one's self they yet remain unassimilated, and not in a fit state for bringing before a meeting of your society.

Instead therefore of giving you a miscellaneous paper of odds and ends, I have thought it best to confine myself to one subject, a subject which has engaged a considerable proportion of my time and

thought while away, and of which I hope to be able to show the practical importance. I mean the place of bacteriology in practical medicine.

And here I think it right to remark that we owe the great bulk, not far from the whole, of the knowledge to which I shall direct your attention to-night to Germany, and, in particular, to the remarkable school of scientific investigators founded by one man, the illustrious Robert Koch. We owe, I am sorry to say, scarcely anything to the old country. In accuracy and minuteness of clinical observation, in the practical application of medical science at the bedside, Great Britain holds, as it has always held, a high, if not the foremost, place. But in scientific medicine, since medicine has become scientific—in the investigation of the nature and properties of disease and the remedies proposed for disease—Great Britain has of late years fallen behind into the position of a learner, and not of a teacher. More particularly is this the case in bacteriology. Here we hold a place not second only to Germany, but after France and Italy, and scarcely on a level with America and Japan. No one regrets this more than I do; I believe it is but a temporary falling off, and that the old country will, before many years, regain something of its rightful place. But a country that will do this must first recognise its deficiencies.

That my subject is not a small one, dealing with some isolated province of medicine of small importance to the most of us, is easy to show. Let me, for example, put before you the relative number of cases due to bacterial infection in a single institution. I have chosen, for the purposes of illustration, the Hospital for Sick Children in this city, not only as the one best known to myself, but as fairly representative of the diseases common among us here, at least in the earlier years of life. Omitting all those diseases of which the bacterial origin is probable, but unproved, omitting also those numerous cases of infantile disease due to poisoning from bacterial products absorbed from the alimentary canal, the diseases known to be due to bacterial organisms may be divided into two classes. The first class includes diseases not due to any one specific micro-organism, but capable of being produced by several distinct organisms. Of these there are two—the various forms of suppuration and inflammation due to the pyogenic cocci (recognised clinically as lymphangitis and lymphadenitis, abscesses, pyæmia, erysipelas, empyema, osteomyelitis, purulent otitis, and meningitis, etc.) and the various forms of pneumonia due to Fraenkel's pneumococcus and other micro-organisms. The second class includes diseases due to specific organisms

—diphtheria, tetanus, typhoid fever, and the various forms of tuberculosis—diseases in which the pyogeni-cocci play but a subordinate and secondary role.

HOSPITAL FOR SICK CHILDREN, BRISBANE.

Five years, July, 1889—June, 1894.	Cases.	Deaths.
Diseases due to staphylococcus and streptococcus pyogenes (Pyæmia, erysipelas, purulent otitis and meningitis, lymphangitis, abscesses, acute necrosis, &c.	335	25
Pneumonia	137	26
Typhoid fever	112	7
Diphtheria	275	120
Tetanus	4	8
Acute and chronic tuberculosis... ..	76	20
Total	939	201

Total number of cases, excluding accidental injuries	Number due to above diseases	Percentage due to above diseases
2,314	939	40.6
Deaths from all causes, excluding accidents	Deaths due to above diseases.	Percentage of deaths due to above diseases
308	201	65.3

In short, out of all the cases treated as in-patients in the Hospital for Sick Children, considerably over one-third, and of the deaths very nearly two-thirds, are due to diseases known to depend on the invasion of the system by certain specific bacteria. There are other locally-prevalent diseases than those mentioned above which are doubtless due directly or indirectly to bacterial agency, but our knowledge of these is not at present definite enough to warrant dogmatic statement, and the above table is quite sufficient to show that we are dealing with one of the largest and most important departments of medicine. Time will not allow me to attempt to deal with my subject comprehensively. I can only dwell upon a few points which are of special interest to the practitioner.

The use of bacteriological methods in *diagnosis* is one which no practitioner can afford to ignore. There are already four diseases in which an exact diagnosis can be made by these methods when all the clinical data are insufficient. These four are tuberculosis, leprosy, cholera, and diphtheria. For the recognition of tubercle and leprosy bacilli staining methods suffice, and these may be said to have already become part of our medical routine. For the demonstration of the organisms of diphtheria and cholera—and of influenza, which may also be diagnosed bacteriologically—cultivation methods are indispensable. Of these three diseases, diphtheria is the one which most

concerns us in this city. Since the research of Loeffler ten years ago on the bacillus of diphtheria, the pathology of this disease has been thoroughly elucidated by many observers. The diagnostic value of the presence of the bacillus in the membranous exudation of the diseased area must now be regarded as established. The mere presence of a membranous exudation on the tonsils can no longer be regarded as diagnostic; for, as has long been known, the formation of a pseudo-membranous exudation is merely the reaction of the mucous membrane to an irritant of a certain degree of intensity. Cases of membranous tonsillitis occur, which to ocular inspection are indistinguishable from true diphtheria, but in which the bacillus is absent. In these cases the characteristic diphtheritic poison is absent, and the mortality comparatively trifling. Clinically the only single absolutely characteristic symptom of diphtheria is the peculiar form of paralysis developed in the later stages of the disease. In the early stages no diagnosis can be considered satisfactory unless the *bacillus diphtheriæ* has been cultivated from the false membrane or pharyngeal secretion. A positive result may be accepted as of practically absolute value. A negative result is of course not of absolute value, depending on the skill of the observer, the stage of the disease, and other accidental difficulties. Nevertheless, the absence of the bacilli in properly made cultures, especially if confirmed by a second observation, makes it in the highest degree probable that the disease is not diphtheria, provided that the cultures are made from material taken from freshly-formed membrane. In competent hands errors will be very rare; indeed, the bacilli may often be detected long after the membrane has disappeared.

Though the presence of the characteristic organism in a case of faucial inflammation—whether membrane is present or not—justifies us in diagnosing diphtheria, yet it must not be forgotten that under certain circumstances the bacillus may be found in healthy subjects. These cases may be classified in three groups.

1. After convalescence, the still virulent bacilli may for a variable time be found in the bacal secretions. Usually they disappear within a few weeks, but they have been observed to persist for several months. During this time the patient is a possible source of infection to others.

2. Under certain circumstances, the virulent bacilli have been found in the mouths of persons who have been exposed to infection, but appear to be immune to the disease; i.e., nurses in diphtheria wards. These persons must also be regarded as possible centres of infection.

3. A bacillus has been found in the mouth of

healthy persons which has all the morphological characters of the diphtheria bacillus, but is not virulent to animals. Very probably, as suggested by Roux, this so-called pseudo-diphtheritic bacillus is really a diphtheria bacillus which has lost its virulence. Whether it may, under certain conditions, recover its virulent properties, and so spread the disease, is not at present known. The virulence of the bacilli is easily tested by inoculating guinea-pigs, or other small animals, with measured doses of uncontaminated broth cultures, after forty-eight hours' growth in the incubator.

Besides the specific bacilli, many other micro-organisms may be isolated from diphtheritic membrane. Many of these are pure saprophytes, and not pathogenic, but one at least, a form of streptococcus, probably plays a most important role as a secondary infection. The septic forms of diphtheria are, there is reason to believe, due to a mixed infection by the specific bacilli and streptococci, and the common complication of lobular pneumonia is to be attributed to the latter, or to other organisms. More work is yet required to elucidate the secondary infections of diphtheria. In an ordinary cover-glass preparation of diphtheritic membrane, many forms of bacilli and cocci can be recognised, and among them characteristic diphtheria bacilli may frequently be detected by an experienced observer. In this way a diagnosis may be made at once in some cases, but it is advisable to check this by subsequent cultivations. Frequently diagnosis by inspection of stained preparations cannot be made, although cultivations on *nutrient media* will establish it with certainty within twelve to twenty-four hours.

We will now pass on to consider the bearing of bacteriology on treatment. Since we have been able to cultivate the germs of certain specific diseases, the whole science of preventive medicine has been revolutionised. In dealing with these organisms we are no longer working in the dark. We know our enemy, and we know also his strong and weak points, and where he is vulnerable. Disinfection has become an exact science; and the whole technique of surgical asepsis has been placed on a secure foundation. It is impossible to dwell on these points, for they well deserve consideration in a separate paper. But, apart from surgery and preventive medicine, the great development of bacteriological knowledge had, until lately, no great influence on the actual treatment of acute specific diseases. The influence of physical conditions and chemical agents on pathogenic bacteria outside the animal body had been investigated and utilised in practice. But their application in

the attempt to destroy the same bacteria in the animal tissues had disappointed early expectations. In particular, the treatment of specific diseases by the internal administration of chemical antiseptics has, it must be remembered, no experimental foundation. For the attainment of new and effective methods of treating these diseases, further advances in our knowledge were necessary.

The first step in the needed direction was made by Koch in his memorable discovery of tuberculin. However much this substance has disappointed the too sanguine expectations formed of its therapeutic value, all that was actually published by Koch regarding it remains true, and, as the first bacterial poison, or *toxin*, ever isolated, it has proved the foundation of all subsequent knowledge and investigation of the *modus operandi* of the pathogenic bacteria. The subsequent discovery of the toxin of diphtheria by Roux and Yersin, and of tetanus by Kitasato, made it perfectly clear that these micro-organisms produce their injurious effects by the secretion of specific chemical products. The pathological effects produced by the injection of living cultures of diphtheria or tetanus bacilli and of perfectly sterile toxin are in each case *identical*; the only distinction being that in the latter case one is able to exactly regulate the *dose* injected. For when living bacilli are injected these continue to secrete a variable and unknown quantity of toxin while within the animal's tissues.

We know that numbers of bacteria, even those not usually recognised as pathogenic, secrete substances which are toxic to higher animal life. The hay bacillus (*Bacillus subtilis*), for example, is incapable of living in the tissues of a guinea pig. Within an hour or two after injection of considerable quantities of a broth culture containing living bacilli, these will be found, if the animal is killed and examined, to have completely disappeared. Yet an attack of illness with sharp febrile reaction follows the injection, even if it contain no living bacilli. For instance, in a guinea-pig weighing 390 grammes, the injection of 2cc. of a bouillon culture of *Bacillus subtilis* of twenty-four hours' growth caused the following rise of temperature:—

Before injection	..	37.4	Centigrade.
After 1 hour	...	37.7	"
" 2 "	...	39.5	"
" 3 "	...	39.6	"
" 4 "	...	39.4	"
" 5 "	...	39.0	"
" 6 "	...	38.6	"
" 23 "	...	37.1	"

In this experiment the culture had been perfectly sterilised (as shown by inoculation on nutrient agar) by heating for half-an-hour to

60° C.*; so that the febrile reaction was not due to the living bacilli. If larger doses are used there is no febrile reaction, but the animal speedily dies with a subnormal temperature. For instance, a guinea-pig weighing 360 grammes was injected with 8cc. of a living bouillon culture of twenty-four hours' growth.

Temperature before injection...	37.9C.	
" 1 hour after ...	37.6	
" 2 " " ...	37.9	
" 3 " " ...	38.1	{ Animal is sluggish & looks ill. Subnormal temperature. Clonic spasms. Death.
" 5 " " ...	37.0	
" 7 " " ...	36.6	
" 9 " " ...	35.8	

Post-mortem.—There was slight congestion and serous exudation at the site of injection; the lungs were deeply injected; there was clear fluid in both pleural cavities, but no bacilli could be discovered anywhere in the body, not even at the site of injection. Death had resulted from simple poisoning with the toxin manufactured by the bacillus in the nutrient medium.

The contrast between the pathological effects produced by *bacillus subtilis* and the bacillus of anthrax is very striking. The smallest quantity of a culture of virulent anthrax bacilli introduced beneath the skin of a guinea-pig is followed by growth of the bacilli in the blood-vessels, so that these are found after death crammed with the characteristic rods. But it is possible to obtain, by certain methods of cultivation, an attenuated variety of anthrax bacilli which is morphologically indistinguishable† from the virulent form, but is incapable of growing inside the tissues of a guinea-pig. Yet a culture of attenuated anthrax injected in sufficient dose will kill the animal purely by the toxin therein contained, precisely in the same way as a culture of *bacillus subtilis*. This illustrates the essential similarity of all bacterial poisoning, and its dependence on chemical bodies which for convenience we term toxins.

When we inject our animal with a dose of toxin insufficient to cause death, we find, after it has recovered, that a second dose no longer causes so great a reaction. Our animal is less susceptible; it has become to a certain extent immune. By carefully regulating the dose and time of each injection of toxin, we can render the animal refractory to doses which at an early stage of the research would have certainly proved fatal. We can by degrees—the task is no easy one—raise our animal to a very high degree of immunity.

I say degree advisedly, for the immunity is always relative to the dose, and, indeed, admits of precise quantitative measurement in terms of the amount of toxin necessary to provoke a reaction. This is what is termed *individual* (or artificial) immunity, and is to be distinguished from *specific* (or natural) immunity,* which does not concern us at present.

This individual immunity is strictly analogous to that which occurs in the human subject after some acute specific diseases. What is its nature? Wherein lies the power of resistance of the immune animal? These fundamental questions have given rise of late years to many theories of immunity. Their partial solution by direct experiment was reserved for my honoured teacher, Professor Behring. Puzzling and intricate as is the whole problem of immunity in many of its aspects, we have now, thanks to his researches, a solid basis of fact to go upon. Behring discovered that the blood—and more particularly the blood-serum—of the immunised animal contains a body which has the property of destroying, or neutralising, or in some way rendering harmless, the specific toxin produced by the bacillus. If, for instance, many times the lethal dose of toxin is mixed in a test tube with a sufficient quantity of the blood-serum of an immunised animal (blood-serum from a non-immune animal does not have any such effect), the mixture, when injected into a susceptible animal, causes absolutely no reaction. Similarly, the separate injection of serum and toxin is followed by no reaction; and, again, if the serum be injected in sufficient dose twenty-four hours previously, no reaction follows the injection of toxin. The substance present in the blood of immunised animals possessing this property is known as *anti-toxin*. As a result of the researches of Behring, we know that a number—probably all—pathogenic bacteria cause the production in the animal body of an anti-toxin, which is in each case specific, i.e., is capable of neutralising only the toxin that has excited its formation.

Much work has been expended in investigating the chemical nature of the anti-toxins of diphtheria and tetanus, but with an almost entirely negative result. We know practically nothing about them beyond the fact of their power of neutralising the toxins of diphtheria and tetanus. They have certainly never been isolated, and there is no known chemical reaction in which the serum containing them differs from the serum of normal animals. They are equally destitute of physiological effects on healthy animals. The diphtheria serum, it is true, occasionally possesses certain irritant properties, which in the human

*A culture of *bacillus subtilis* of twenty-four hours' growth in nutrient broth contains no spores.

† It does not form spores so readily.

* e.g. The immunity of the rat to anthrax.

subject show themselves by producing erythematous rashes, urticaria, or pain referred to the joints. But these symptoms are certainly not due to the anti-toxin, but to other little-known bodies occasionally present in the blood-serum of horses as an individual peculiarity, and probably derived from substances on which the animals have been fed. In serum which has been kept for many weeks after the addition of a minute proportion of carbolic acid, these irritative properties become impaired, while the anti-toxin strength remains unaltered.

Bodies possessing the properties of anti-toxins, *i.e.*, capable of immunising animals against lethal doses of their respective toxins, have been discovered in the blood serum after attacks of disease in the human subject, or after experimental inoculations in animals, in the case of pneumonia, streptococcus infection, typhoid fever, cholera, and even in the case of certain poisons not of bacterial origin. Only, however, in the case of tetanus and diphtheria has serum been so far obtained of sufficient anti-toxin strength to have any curative value. In all these instances the action of the anti-toxin is the same in character. It acts purely on the poison secreted by the bacilli, not on the bacilli themselves. The anti-toxin does not kill the bacilli; indeed, diphtheria bacilli can be cultivated in a serum which contains a large quantity of it. It is important to grasp this fact, or otherwise the rationale of the new treatment will be altogether misunderstood.

It is evident that, in the case of experimental observation on tetanus toxin, for example, the anti-toxin serum may be used in three different ways. It may be injected simultaneously with, or before, or after the toxin. If the two are injected simultaneously, a very small amount of anti-toxin will prevent the lethal dose of toxin from causing any symptoms. If the anti-toxin is injected twenty-four hours before the toxin, about eight or ten times as much anti-toxin will have the same effect. The amount of an anti-toxin-containing serum necessary in the first instance gives us what is known as its *mixing value*, that in the second what is known as its *immunising value*. These remain the same, whatever dose of toxin be used. If 0.002cc. will immunise an animal against the lethal dose, 0.02cc. will immunise it against ten times the lethal dose, 0.2cc. against one hundred times the lethal dose, and so on, provided that the toxin is in each case injected twenty-four hours after the serum. But if the *curative value* is required to be known, the toxin must be injected first, and the serum only injected after symptoms of the poison have begun to develop. In the case of tetanus this is about eight hours after the injection of the toxin.

We now find that quite different—relatively enormous—doses of serum are necessary to save the animal against death from a lethal dose of toxin. In the case of a guinea pig, at least 10,000 times the immunising dose of anti-toxin is required. Furthermore, the largest doses are only successful within a narrow limit of time. After the disease has reached a more advanced stage, the largest doses of anti-toxin prove insufficient. It is for this reason that Professor Behring has so far refused to allow his tetanus anti-toxin to be offered for sale, though it can be obtained gratuitously by any medical man in Germany, under certain conditions as to use and publication of the results obtained. Hitherto it has been of use only in the less severe cases of tetanus, and useless in advanced and malignant cases. There is a tetanus anti-toxin of weaker strength on the market, but as this has not proved capable of saving any animal in the laboratory after symptoms of tetanus have developed, its use in the human subject lacks experimental basis.

In the case of diphtheria, it is fortunately otherwise. It is possible to save animals even in advanced stages of poisoning by diphtheria toxin, though here also, the later the stage of the disease the larger the dose of anti-toxin necessary. My concluding remarks will therefore be devoted to practical points regarding the use of the anti-toxin of diphtheria.

Firstly, as will be gathered from the preceding paragraphs, neither the toxin nor anti-toxin behaves as a ferment, but produces its effects strictly according to dose. The anti-toxin strength of the serum admits, therefore, of *exact quantitative measurement*. I have entered at some length in another paper, to which I must refer you, into the method of estimation. I can only state here that a certain anti-toxin-strength of serum is arbitrarily defined as Normal serum. The strength of the serum is then distinguished as 60 times Normal, 100 times Normal, and so on. Each cc. of 100 times Normal serum is said to contain 100 anti-toxin units; 6cc. contain 600 anti-toxin units; 10cc. contain 1,000 anti-toxin units, and so on. In this way, the dose administered at each injection is to be recorded as so many anti-toxin units. Of the exactness of these figures, when Behring's serum is used, there is no doubt; for every sample of serum has its strength accurately determined in the laboratory before it is bottled for use.

Secondly, the serum keeps well. To ensure this, half per cent. of carbolic acid is added to it. The most stringent tests in the laboratory show that serum so treated will not decompose even when kept for weeks in unstoppered bottles in

the incubator at 98 degrees F. Even if the serum is inoculated with pus cocci these will not grow in it, but after some weeks in the presence of the serum (with half per cent phenol) they die, and the serum becomes sterile. On the other hand, the anti-toxin strength has shown no diminution in serum that has been kept many months. Notwithstanding this, it is wise not to open the bottles before the serum is to be used, and in the case of Behring's serum this is never necessary, as one dose only is put into each. The syringe used for injection, which ought to be capable of holding 10cc., should always be sterilised before use. There is only one way of doing this with certainty, and that is to use a syringe which admits of being boiled without injury.

A full dose should always be injected. Many recorded cases have been treated with ridiculously inadequate doses. It is highly improbable that these doses have exerted any influence on the progress of the disease. Furthermore, the injection should be made *as early as possible*. In a suspicious case, the injection should be made without waiting for the result of the bacteriological diagnosis, which takes from twelve to twenty-four hours; but certainly such cases should never be *published as cures* unless this diagnosis has been made subsequently. The element of time is of the first importance. Of cases treated within the first 48 hours the mortality recorded has been exceedingly small; the mortality of cases treated after the third day appears to have been reduced, but still remains high. For an early case 600 anti-toxin units suffices (these doses are for children, not for adults); for advanced cases, 1,000 or 1,500 should be injected. In simple cases a single injection is enough, and it need not be repeated; for the worst cases repeated injections may be used, but the prognosis must be regarded as very doubtful.* To save an advanced case, three conditions must be observed:—

1. The use of large doses of anti-toxin.
2. Respiratory obstruction must be relieved, if present, by intubation or tracheotomy.
3. The gravity of the case *must not be dependent on conditions such as lobular pneumonia, which are due to secondary infections*, and are not affected by the remedy.

In addition to its curative use, the immunising use of the anti-toxin has been of service in the case of children who have been exposed to infection. Immunity produced by the injection of the anti-toxin is only temporary, lasting some six or eight weeks, and disappearing as the anti-

toxin is excreted from the body. Behring recommends that 150 units, or one-quarter the curative dose, should be injected under these circumstances, though a smaller dose might prove sufficient. If the child is already in the incubative stage of diphtheria, there is a possibility that the disease may nevertheless make its appearance. The few cases that have appeared soon after the injection of serum (less than 150 units) have however been very benign in character.

The only practical question that I shall refer to in conclusion is as to the kind of diphtheria-anti-toxin that should be used. Strictly speaking, there is only one kind, but that is procurable from various sources. As far as I know, that manufactured at Höchst, under the supervision of the original discoverer, Professor Behring, is the only one of which the exact anti-toxin strength of each sample is known and expressed in anti-toxin units. The serum stands keeping and exportation perfectly well. I should be very sorry to see its manufacture undertaken, as has been proposed, in Australia, *unless results as accurate are attained*. To do this would necessitate the erection of an adequate laboratory, and engagement of a competent staff of experts, able to devote their whole time to the work. Anything less than this would be a mistake to be deprecated. It is a comparatively easy, but inadvisable, matter to produce anti-toxin of unknown strength. But, for my own part, I should not think of employing any of unknown strength, when serum accurately determined was available. For a child suffering from diphtheria nothing but the best is good enough, whether in hospital or private practice. We should never, I imagine, think of treating one of our patients with a solution of morphia, for example, of unknown strength.

DR. LOVE congratulated Dr. Turner on his paper, and made some remarks on the practical difficulties which sometimes occurred in making a bacteriological diagnosis. Far better results were to be looked for where anti-toxin was used early in the disease than in late cases in which secondary complications had developed.

DR. ASHWORTH gave details of some cases that had been under treatment in the Children's Hospital.

DR. LITTLE wished to know whether there were any difficulties in the preparation of diphtheria anti-toxin which would prevent its manufacture in Australia.

DR. GIBSON thought that the statistics which had been published of the results of the serum treatment were misleading, for the doses of anti-toxin employed in the early cases were much smaller than is now recommended. With the use of much larger doses, even better results might be anticipated. Behring's serum had the great advantage of concentration, only 6cc. being probably equivalent in anti-toxin strength to 20cc. of Buffer's serum. He was strongly in favour of repeating the injection in bad cases, and mentioned

* In using large quantities of serum the possibility of the carbolic acid causing symptoms should be remembered.

a successful case in which he had injected 80cc. of Ruffer's serum. He based his reliance on the new treatment very largely on the fact that it had been the result of many years' experimental laboratory work. He considered that a doubtful case of diphtheria might be safely sent into the diphtheria ward if previously injected with anti-toxin; but it would have to be removed within a few weeks if the diagnosis turned out to be incorrect, as the immunity conferred by the injection was limited to that time.

Mr. POUND advised that a cover-glass preparation of the membrane should always be made on the spot for staining purposes. He mentioned that he had succeeded in manufacturing a large quantity of tuberculin by a modification of Koch's method, and had never failed to obtain a reaction from the injection of tuberculin in tuberculous cattle. He thought anti-toxin also might be made in the colony.

Dr. TAYLOR congratulated Dr. Turner on his paper, and inquired whether there was now any foundation for regarding diphtheria as primarily a general disease, with secondary local lesions.

Dr. THOMSON asked what relation the bodies described as ptomaines bore to the toxins of specific diseases.

Dr. HILL inquired how the injection of anti-toxin affected the temperature in diphtheria, and what the indications were for repeating the dose.

Dr. TURNER replied that the clinical reports were conflicting, some observers reporting a fall, others a rise of temperature after injection, and that the whole clinical question must be regarded as *sub judice*. Ptomaines were alkaloidal bodies; the toxins of diphtheria and tetanus were certainly not alkaloidal, but no positive statement could be made as to their chemical nature. He congratulated Mr. Pound on his manufacture of tuberculin, a work requiring great technical skill; but pointed out that the manufacture of anti-toxin required an altogether different technique. It depended on the successfully bringing animals to high degrees of immunity, was attended with great difficulties, and very few in Europe, and no one in Australia, had had any experience in such work. What he protested against was the making of serum of low and undetermined anti-toxin strength. He thought that the old controversy as to the constitutional or local primary nature of diphtheria had been finally settled, and that diphtheria was a local disease producing constitutional symptoms by the poison absorbed from the local lesion.

Dr. HARDIE announced that, owing to his being about to leave for England on nine months' absence, he was compelled to resign the secretaryship of the society. It was agreed that Dr. Turner should act as secretary *pro tem*.

EASTERN SUBURBS MEDICAL ASSOCIATION OF SYDNEY.

A GENERAL meeting of the above was held on Friday, March 1st, in the committee-room of the Paddington Town Hall. Present: Dr. Barkas (President), Drs. T. M. Kendall, Huxtable, Worrall, Matheson, Quaife, A. F. Parker, Neill, Tidswell, Cosby-Morgan, Mullins, Dick.

Visitors: Mr. Magney, Mr. A. W. Green. Several apologies from gentlemen invited to attend were received.

The hon. secretary (Dr. J. A. Dick) proposed the re-issuance of the resolution relating to the appointment of a deputation to wait upon the Colonial Secretary with reference to the establishment of a Cottage Hospital.—Carried.

Dr. T. M. KENDALL, the surgeon to the Metropolitan Board of Water Supply and Sewerage, read a paper upon—

SOIL AS A FACTOR OF DISEASE IN THE EASTERN SUBURBS.

THE paper was illustrated by spot-maps, sections, diagrams, &c. Dr. Kendall said:—

"The consideration of soil as a factor of disease is both instructive and interesting, and its importance in this regard has been fully recognised since the days of Hippocrates. 'Man, in constructing protections against exposure, has thus constructed conditions of disease, but as he did this in an age when he could not foresee the result of his work, it is not fair to blame him because in his primitive days he did not know better.'—(Sir B. Warr. Richardson.) The soil, therefore, in its pure state, is probably not a factor of disease; but as we have to deal with contaminated soil, which has been rendered impure through the ignorance and neglect of man, the task of purification becomes a difficult one. *Conformation* and *elevation* have a great influence upon soil, and *vegetation* is very important. Trees are useful in that they attract moisture, but if they are too thickly placed they obstruct the action of the sun's rays, impede the current of air, and abstract too much moisture from the soil. Herbage has always a good effect in keeping the earth cool, and also in preventing the too free egress of miasmatic vapours. The *absorption of heat* by soils varies according to their nature, and also with the diurnal temperature. Dark, loose, sandy soils absorb heat freely, while clay soils are cold and generally damp. The subterranean temperature varies according to the depth at which it is taken. Here on this diagram we see that the subterranean temperature becomes greater and greater than that of the external temperature of the air, according to the depth at which it is taken. *Geological formation* also has a great influence upon soil. The geological formation of the eastern suburbs, as we see from this diagram, is of the very best kind, viz., sand upon a bed-rock of rock, having so good a slope that the sand is rarely wet. The subsoil water flows away readily, and does not stagnate. As compared with other suburbs, we see how favored the eastern suburbs are. In Erskineville, where the soil is composed of very wet clay, and the subsoil water is close to the surface, the difficulty of keeping the borough healthy is very great. This map shows the typhoid patch of Erskineville—in fact, I might call it the typhoid factory—as many cases occurring in other suburbs, and in the city, have been traced to this patch, which is again shown on this spot map. The blue spots show the reported cases of typhoid fever, and some of the streets in the typhoid area of Erskineville are almost obliterated. Soil contains *air* and *water*. The subterranean atmosphere, which is confined chiefly to the surface layer of the soil, is in continual movement, and this movement is affected by the temperature of the earth and the fluctuations of the level of the sub-soil water. The subsoil water may affect health, 'by rendering the soil above it moist, either by evaporation or capillary attraction.'—(*Parke's Hygiene*).—Fluctuations of the level of this water cause increased movement of the ground-air, so that large quantities of it are slowly poured out from the soil. Pettenkötter, of Munich, asserts that typhoid fever is always prevalent when the level of the sub-soil water is low. Our experience in this city leads us to give some weight to this statement. During the year 1894 the health of the metropolis was fairly good on the whole, and the general death-rate was greatly decreased. The zymotic death-rate was increased, and the increase was chiefly due to the prevalence of typhoid fever. As the year

was very dry, and the temperature higher than the average for five years, it is only likely that the level of the sub-soil water was lowered. Pettenköfer's statement, therefore, is worthy of serious consideration. *Moist* soils are generally supposed to favour disease, and Buchanan states that phthisis exists to a greater extent on moist than on dry soils. Thorne says that diphtheria flourishes best on a moist soil, and it is worthy of note that diphtheria was more prevalent during the rainy season of the year 1894. Years ago London was a nursery for ague; but now, since the institution of sub-soil drainage, ague is unknown. *The value of sub-soil drainage* is shown by the fact that nine years ago, in Bourke-street, Redfern, opposite the Australian Brewery, the sub-soil water was within three feet of the surface of the land, but now, since the sewer trench has been cut, the level of the sub-soil water is seventeen feet below the surface. *Made soil*, formed of house refuse and street garbage, is unfitted for building sites and public parks. This is one of the causes of the typhoid area of Erskineville, and will prove a source of danger to that district for many years, although in the end nature's arrangement of purifying the soil will render the soil healthy. This process of purification is called nitrification, and is brought about by means of certain micrococci and bacilli, called saprophytes, which convert the nitrogen of organic matter into ammonia and nitrites, and also prevent the propagation of pathogenic organisms near the surface of the soil. It must be remembered, also, that the inherent warmth of a dwelling abstracts the vapours from the soil, and that outbreaks of fever have been traced to this source. Provided there is a free outlet for the sub-soil water, and that a proper sewerage is provided, *reclaimed soils* are not unhealthy. *Dry sandy soils*, such as exist in the eastern suburbs, are healthy; but on account of their porosity they are very liable to organic pollution, and consequently it is necessary to institute a good system of sub-soil drainage to prevent stagnation of the sub-soil water. Such soils may become contaminated on account of the free movement of the ground air, and when thus contaminated are likely to give off infective organisms. Pathogenic germs may lie dormant in soil for years, and may be roused into activity when the soil is disturbed for building purposes. Instances of this kind are well known in our city, and cases of disease have thus arisen. Diarrhoea occurs mostly on made soils, and Ballard says that it has some relation to the subterranean temperature four feet from the surface. A good idea of the distribution of typhoid fever may be gleaned from the examination of this spot map, which clearly shows that it flourishes most upon clays, especially wet clays, with shale under-strata. The suburbs where the land lay low were the greatest sufferers. In 1894 only thirty-one cases were reported from the eastern suburbs, and only twenty of these originated in the suburbs themselves. These suburbs were to be congratulated for the freedom from preventable diseases."

Dr. HUXTABLE quoted instances to show that this disease could be directly communicated from one patient to the attendants. It was quite clear that typhoid was frequently spread in this fashion by direct contagion.

Dr. QUARF thanked Dr. Kendall for his paper, and proceeded to discuss whether soil *per se* was in any way productive or destructive of any disease. In the course of his remarks, he referred to Dempster's important investigations upon soils, reported in the *British Medical Journal* of May 26th, 1894. As regards the question of *air in soil*, he pointed out that we

should be compelled to have a roomy and freely-ventilated space under the ground floors of all houses. As to the question of *water in soil*, there could be no doubt but that the basements of all buildings should be drained. He wished to emphasise the statement that typhoid was directly communicable, and asked whether the Water and Sewerage Board had any power to compel persons to put in a proper system of drainage and ventilation.

Dr. TIDSWELL discussed the part taken by air and water in soil in the spread of disease. How the germs were freed from the soil was a most difficult question to answer. A rising ground-water in a dry soil presses out the air, and with it the germs. Air-proof basements in houses were of great value.

Dr. KENDALL replied, and, in answer to Dr. Quaife, said that the Water and Sewerage Board had no power over premises which were connected with the old system of drainage.

Dr. HUXTABLE thanked the President for having invited him to the meeting as honorary secretary of the New South Wales Branch of the British Medical Association. It was the first meeting of any suburban society to which he had been so invited, and it gave him very great pleasure to be present. He wished the Eastern Suburbs Medical Association every success.

Dr. J. A. DICK moved a vote of thanks to Dr. Kendall. Seconded by Dr. Barkas, and carried by acclamation.

The meeting then terminated.

NEW SOUTH WALES MEDICAL UNION.

THE annual meeting of the New South Wales Medical Union was held at the Royal Society's rooms, Sydney, on March 27. Dr. F. H. Quaife, Chairman of the Council, presided, and there was a large attendance of members. After the usual formal business had been transacted, the hon. secretary (Dr. G. L. Mullins) read the annual report for the year 1894-95. The report stated that during the past year 46 new members had been elected, while five members had withdrawn, two died and two did not pay their subscriptions. There were on February 28, 1895, 127 members. One local secretary, Dr. C. S. Bowker, of Murrumburrah, had resigned his office owing to his having left the district. Two new local secretaries were appointed, viz., Drs. A. H. Meeke, of Candelero, and R. E. Grigson, of Muswellbrook.

Several cases have been submitted for consideration. In the case of the late Dr. Struthers v. White, the defendant apologised and withdrew all charges and paid all costs.

A case was brought before the council early in 1895, in which two medical men in the country were the opposing parties. The council decided that such did not come within its jurisdiction, as it was entirely a question of medical ethics.

A third case was that of Hull v. Dr. Cummings. In this case the plaintiff sought to recover damages against Dr. Harold L. Cummings, of Annandale, for unskilful treatment. Drs. Chambers, Foreman, Worrall and Graham, to whom we owe the thanks of all the members, gave evidence on behalf of Dr. Cummings, in whose favour a verdict was returned by the jury. No pecuniary assistance was given to Dr. Cummings in this case, owing to his not being a member of the Union at the time of the action.

A fourth case is still *sub judice*. The council is therefore debarred from making any comments, but it may be permitted to state that the council has reason to

believe that our member's case is a good one, and therefore the sum of £50 has been voted to meet any expenses that may arise.

Dr. C. Dagnall Clark has found it necessary, owing to press of professional work, to resign his position as trustee.

The report concluded with the hope that before the end of the year now beginning every member of the medical profession in New South Wales would become a member of the Union. The report was adopted.

The Chairman announced the election of thirty new members since March 1. Dr. Crago read the Treasurer's statement, which showed a credit balance of £200 18s. 4d. This report was also received and adopted.

Dr. G. Lane Mullins proposed some alterations in the rules. After discussion, the alterations were carried unanimously.

The election of office-bearers for the year 1895-96 was then proceeded with, Drs. H. Kirkland and Walker-Smith acting as scrutineers. The result was as follows:—Trustees: (in place of Dr. Clark), Dr. T. Fiaschi, unopposed. Hon. Treasurer: Dr. W. H. Crago, re-elected unopposed. Joint Hon. Secretaries: Drs. A. Jarvie Hood and G. Lane Mullins, re-elected unopposed. Members of Council: Drs. G. H. MacSwinney, J. Foreman, A. MacCormick, S. T. Knaggs, P. J. Collins, R. Stot-Skirving, E. J. Jenkins, B. J. Newmarch, R. L. Faithfull and P. M. Wood. Auditors: Drs. Sydney Jamieson and G. A. Marshall, unopposed.

Votes of thanks to the office-bearers for their services during the past year, and to the chairman of the meeting terminated the proceedings.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Gillon, George Gore, M.D. Glas., 1894; F.R.C.S. Ed.
 Fordyce, Henry St. Clair, M.B. Sydney, 1896.
 Hall, George Reginald Percy, M.B. Sydney, 1895.
 Hughes, Michael O'Gorman, M.B. Sydney, 1896.
 Jackson, John William, M.B. Sydney, 1895.
 Rutter, Graham Ford, M.B. Sydney, 1895.
 Studdy, William Bradridge, M.B. Sydney, 1895.
 Spark, Ernest James Schuldharn, M.B. Sydney, 1895.
 Byrne, Edward Henderson, L. Med. et Surg. Trin. Coll. Dub., 1875.
 Hughes, Samuel Henry, L.R.C.P. Lond., 1888; L.S.A. Lond., 1888; M., 1888; F., 1894; R.C.S. Eng.
 Gormley, John William, L. et L. Mid., K.Q.C.P. Irel., 1883; L.R.C.S. Irel., 1882.
 Adams, George Thomas Cooke, L.R.C.P. Edin., 1892; L.R.C.S. Edin., 1892; L.F.P.S. Glas., 1892.

NEW ZEALAND.

Mason, James, L.R.C.P. et R.C.S. Edin., L.F.P.S. Glas., 1887; M.D. Brux., 1889; Dpt. Publ. Health, Camb., 1892.
 Diamond, William, M.B., Ch.M. Glas., 1888.

SOUTH AUSTRALIA.

Jermyn, Frederick David, M.B., B.S. Melb., 1888.
 Shuter, Richard Ernest, M.B., B.S. Melb., 1892.
 Watson, Alexander Eugene Henry, L. et L. Mid.; R.C.P. et R.C.S. Edin.; L.F.P.S. Glas., 1886.

VICTORIA.

Shanasy, Thomas, L. et L. Mid. R.C.P. et R.C.S. Edin., 1894; L.F.P.S. Glas., 1894.
 Barr, Valentine Herbert, L.S.A. Lond., 1892; M.R.C.S. Eng., 1894; L.R.O.P. Lond., 1894.
 Names restored to the Register under the provisions of section 7 of the Act:—
 No. 1,558, Thomas Augustus Quirk, M.R.C.S. Eng., 1888; L.R.O.P. Lond., 1888.
 No. 1,718, Andrew Seymour Brewis, M.B. et Ch.B., 1887; M.D., 1890, Durham; M.R.C.S. Eng., 1887; L.S.A. Lond., 1887.
 No. 1,740, Henry James Dempster Innes, M.R.C.S. Eng., 1890.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary of their branch in Brisbane.

All communications intended for the Editor may be addressed direct to "The Editor, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors, Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

All business communications and remittances should be addressed to Mr. L. Bruoh, Medical Publisher, 13 Castlereagh-st, Sydney. Telephone No. 1770.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, MAY 15, 1895.

EDITORIAL.

THE SUPREME COURT ACTION, CUNNEEN v. COOPER.

THE result of the action, Cunneen v. Cooper, tried in the Supreme Court, Sydney, in March last, came as a surprise to most medical men in the colony. The facts of the case are briefly as follows:—In January, 1893, a boy named Cunneen, living at Tamworth, was thrown from his horse, and sustained a fracture of the external condyle of the humerus, extending into the elbow-joint. Mr. Cooper, the correctness of whose diagnosis was admitted, treated the lad, who alleged that, owing to want of skill on the part of the defendant, "the arm is stiff, has withered, and is useless." For the plaintiff, Mr. Eustace Pratt, having examined the boy's arm in court, stated, "He will not, I fear, ever have the free use of his arm." Some extracts from standard works were read to Mr. Pratt, and he was asked if he agreed with them. A passage from Pickering Pick's "Fractures and Dislocations" was read—"Hamilton recommends that it (passive motion) be begun within seven days; Malgaigne and Sir Astley Cooper, about the end

of the third week." Mr. Pratt said he did not agree with Malgaigne and Sir Astley Cooper in this. A passage from "Erichsen's Surgery" was then read—"Although union of fractures extending into articulations takes place readily enough, it cannot be expected that the patient will recover with as mobile a joint as if the fracture had traversed merely the shaft. In fact, in the majority of these cases, the patient will be left with a joint that is weak, stiff, and painful." Mr. Pratt said *he did not agree with Erichsen in this, though he admitted that Erichsen was a very high authority.* Mr. Pratt also dissented from opinions expressed in "Heath's Dictionary of Surgery," and also in an article in the *British Medical Journal* by Mr. Hutchinson, of the London Hospital. Mr. Pratt was the only medical witness called on behalf of the plaintiff, while, for the defendant, Drs. Sydney Jones, MacCormick, Knaggs, and Jamieson testified that Mr. Cooper's treatment was the best possible under the circumstances. After examining the boy's arm in court, Dr. MacCormick said: "The bones are in very good position. . . . I think the boy will get fair use of the arm. I cannot say if he will get the same use as before the accident, because the muscles are contracted—whether voluntarily or not I cannot tell." Dr. Sydney Jones said: "I have now examined the boy. There appears to be very good union between the external condyle and the bone; there is so much muscular resistance that it is impossible to tell the range of extension and flexion there is." Dr. Knaggs said: "I am not able to make a proper examination, as it seems to hurt him; I cannot tell the amount of the power of extension he possesses unless he is put under chloroform; the fracture is properly united; I see nothing in the elbow to indicate improper treatment; in injuries of this kind the results vary considerably; a case treated with the highest skill may result in an impaired movement of the limb."

In summing up, Judge Simpson explained that this was an action for negligence against a medical man, and that "negligence" meant either, (1) the doing of something which a man ought not to do, or (2) the leaving undone of something which he ought to do. A surgeon in the position of Mr. Cooper was only bound to use a reasonable amount of care, and bring a reasonable amount of skill into the performance of his work. Mr. Cooper was not bound to manifest such an amount of skill as a more highly-educated or experienced surgeon might have. He did not mean to imply that Mr. Cooper was not highly-educated—indeed, evidence had been given that he possessed very high qualifications. His

Honor said—"Has Dr. Cooper a reasonable amount of skill and knowledge, or has he been guilty of want of care in this case, and so created this result? It will not do for you to conclude that the only power of extension of the arm which the boy shows now is all that he possesses, or will possess. What is the complaint? What is the negligence attributed to Dr. Cooper? *It all depends on Dr. Pratt's evidence.*" The jury, after an absence of forty-four minutes, returned with verdict for plaintiff for £200. The jury was evidently impressed by the evidence of Mr. Pratt to such an extent that it dismissed the published opinions of such authorities as Erichsen, Howard Marsh, Malgaigne, Astley Cooper, and Pickering Pick as unworthy of consideration. The sworn opinions of Sydney Jones, MacCormick, Knaggs, and Jamieson were swept aside for the opinion of Eustace Pratt, M.R.C.S., of Tamworth.

An application for a new trial having been dismissed by the Full Court on May 6, it behoves us to consider the effect of such a verdict upon the profession in New South Wales. So many medical men are now threatened with actions at law that practice is becoming intolerable. The members of our profession are liable at any moment to be called upon to treat all kinds of injuries and ailments. We are the first to be called in when a patient is in trouble, yet we are the last to be paid. Matters have now come to such a pass that we must consider very seriously whether we are not bound, in justice to our own reputations, when called to attend any surgical injuries, to insist upon a consultation with a respectable medical practitioner, or, failing such consultation, to decline to treat the case at all. There is no legal obligation upon us to treat any patient, and self-preservation being the first law of nature, we must not allow kindly feelings to lead us to destruction.

The following are the remarks of the Judges in the Appeal Court on May 6th, 1895:—

The Chief Justice said: It must be borne in mind in these cases that we are not sitting as a jury, neither is it our function to go over the same ground, even although, in going over that ground, we might arrive at an entirely different conclusion. What we have to say is, looking at the whole case, whether the verdict of the jury was such a verdict as reasonable men ought not to have arrived at. If the verdict is passed for the plaintiff, and there was evidence given on behalf of the plaintiff which the jury, if they saw fit, were entitled to believe, it is impossible for the Court, no matter what they thought of the case, to interfere. In this case there is the evidence of Dr. Pratt, a gentleman of whom the Court knows nothing. He may be a very

able man, and may be the reverse, and, judging from his evidence, he certainly seems to disagree with a number of text-writers of medical and scientific works and recognised authorities in the medical profession; and, judging from that circumstance, it may be that he is a witness to whose evidence the Bench are not inclined to attach much weight. Again, a number of gentlemen who are well known as being amongst the ablest medical men in this colony, or in this hemisphere, were examined, and he is also in opposition to the opinion of these gentlemen. (His Honor here quoted the evidence of Mr. Pratt, and pointed out that it is contradicted by that of Dr. Sydney Jones). His Honor proceeded: Then Drs. Jamieson, Knaggs, and MacCormick were examined on behalf of defendant, but the jury has thought fit to believe Dr. Pratt's evidence as opposed to the evidence given by these other medical gentlemen.

It is very likely, if this case were tried before one of the Judges sitting alone, and the same evidence was given, the verdict would have been the other way. The law, as it existed in this colony, had thrown the responsibility on a jury, who, in many cases, were very competent to discharge their duty, while in others they were not so competent.

Mr. Justice Innes: On perusing the evidence, I should, in all probability, have found for the defendant, but that is not enough.

Mr. Justice Simpson concurred.

THE RINGAROOMA CASE.

A NAVAL SURGEON COURT-MARTIALLED.

THE recent court-martial on Surgeon Lea, of H.M.S. "Ringarooma," has caused considerable sensation and comment throughout the colonies.

We purpose to view it from a professional standpoint, so far as it may affect members of the medical profession.

The charges made against Surgeon Lea may be summarised as follows:—1. Contemptuous behaviour towards Captain Johnson, his superior officer. 2. Wilful disobedience of his captain's lawful command, by refusing to go below under arrest, when ordered. 3. Refusal to comply with his captain's request to sign an entry of his arrest in the log-book.

The facts of the case are, briefly, as follows:—On April 17, while at general quarters, during the inspection Captain Johnson censured Surgeon Lea for an omission on his part in not having a table slide placed in position, and ordered him to do it himself, which order the surgeon requested to be placed in writing. This the captain refused

to do, and proceeded to inspect the sick quarters, when he again told the surgeon that in future it would be his duty to fix the slide table himself, which, in the meanwhile, had been done. Subsequently the surgeon saw the captain on the forebridge, acting in what he deemed to be an excited manner. Taking into consideration a previous knowledge of the captain's state of health and this circumstance, and strengthened in his opinion by prior consultations with other naval surgeons, Dr. Lea formed the conclusion that his captain, from a medical point of view, was unfit for duty, and placed him upon the sick list. He also informed the lieutenant next in command what he was about to do, and asserts that that officer acquiesced in his action. He then told the captain that he had placed him upon the sick list, and requested him to go below for further examination. The captain declined, and threatened to place him under arrest. Dr. Lea at once informed the senior lieutenant and the officer for the day what had transpired, and the captain's refusal to be placed upon the sick list; and appealed to the senior lieutenant, as the then commanding officer, for further orders, but this officer now declined any responsibility. The captain having temporarily left the ship, the surgeon was permitted to send the following message by signal to the commanding officer of the "Mildura":—"Have placed captain on sick list, and consider it of urgent necessity to send him to the hospital at once. He has refused. Awaiting orders." To which he received the following reply:—"Captain in charge away in Tauranga; expect him back to dinner." Captain Johnson, having visited the "Royalist," returned on board, and ordered the surgeon to initial an entry in the log-book, to the effect that he had been placed under arrest. The surgeon declined to do so unless so ordered by the senior lieutenant (whom he now recognised as being in charge), but on the lieutenant's advice went below, and was placed under close arrest in his cabin, under the surveillance of a sentry with fixed bayonet. After a period of three-and-a-half hours he was released to open arrest by order of Captain Castle, the then senior officer of the station, and subsequently, in response to a petition from the prisoner for immediate release from illegal arrest, he was transferred to the "Dart," released from arrest, and permitted to resume his duties as a surgeon in her Majesty's service.

The trial lasted three days, and in his defence the prisoner claimed the right to put in evidence justifying his course of action, and tendered the testimony of thirty witnesses to prove the necessity of placing his captain on the sick list, and thereby show the conscientiousness and strict

sense of duty which prompted his action. This the Court peremptorily and persistently refused, found the prisoner guilty, and sentenced him—a man of twelve years' service, without a stain or reproach to his character—to be dismissed the service. This sentence also imposes a fine of £1,200, to which sum the surgeon would have been entitled had he completed a further service of three months.

Under similar circumstances, what is a naval surgeon to do? There are, we believe, two courses of action. When a surgeon considers that sufficient symptoms have developed in an officer in command of his ship to render him incapable of performing his duties, it would be his duty to report such to the next in command, and request him to take action. He would thus relieve himself of further responsibility, and throw the onus of further action upon the officer to whom he made the report. It would be then competent for this officer at once to communicate with the chief executive officer of the station, within whose province it would be to order a Board of Survey, consisting of an executive officer of rank and three naval surgeons, who would then make full enquiry into the facts of the case.

Another course would be open to the surgeon, and for which there has been a precedent.

Some years ago the senior-surgeon formed the opinion that the Commodore of this station was medically unfit for duty, and reported to the next in command that he should be placed on the sick list. This officer declined the responsibility of taking any action, but enquired if there were any other way out of the difficulty? The surgeon replied that there was; and if the officer declined to act according to naval procedure he would bring the civil law into force. Two medical men were brought from shore; they certified to the Commodore's unfitness for duty, and he was promptly removed to an institution for treatment.

It seems, therefore, that the punishment meted out to Dr. Lea was for doing in an irregular manner what was in his opinion a proper proceeding. We cannot but sympathise with him in being denied the privilege of bringing forward such evidence that might have justified his proceedings, and extenuated the very grave offence with which he was charged.

In our editorial last month on the necessity for a Public Health Act, we quoted statistics of typhoid fever and diphtheria as for New South Wales. The figures are those for Sydney and suburbs, not for the whole colony. We had no thought of comparing the figures for Melbourne with those for New South Wales. We regret very much that by an error in transcription we were made to assert that the decrease of typhoid fever in Sydney was entirely due to the extension of

the sewerage system in the suburban districts. The sentence should have read—"The decrease is entirely due to the extension of the sewerage system in the suburban districts, and the successful working of the Dairies' Supervision Act." We are fully convinced of the important part played by the Dairies' Act in the prevention of typhoid and other diseases.

LETTERS TO THE EDITOR.

MEDICAL ADVERTISEMENTS.

(To the Editor of The Australasian Medical Gazette.)

SIR,—In the last number of the *Gazette*, I observe you publish a copy of our local advertisement at the end of an article in which you justly condemn medical advertising. While seeing nothing objectionable myself in our notice, I regret very much that it has evidently given offence to our colleagues. Allow me to state that personally I had nothing to do with the insertion of the advertisement referred to, which has been the custom of the senior partner of our firm for the last five-and-twenty years, due to the scattered and migratory nature of a large proportion of the population of this district. However, owing to my representations, the advertisement has been withdrawn, and I trust that this act and apology will be accepted as an *amende honorable* by the medical profession of Australia. Hoping you will give this letter due publicity in your next issue,

I am, yours &c,
J. A. NEPTUNE SCOTT, M.D.

Warrnambool, Vic.—April 3, 1895.

LARYNGEAL PAPILLOMA.

(To the Editor of The Australasian Medical Gazette.)

SIR,—I have just read in your last issue the paper by Dr. H. A. Francis on Laryngeal Papillomas with much interest; the more so, that reports of this class of case so seldom enter an Australian paper. The rarity of these cases has been as remarkable to me as to Dr. Lockhart Gibson. In my own experience neoplasms of all kinds have been rather uncommon, as compared with the records of European practice; and, during the past seven years in Sydney, I have not seen more than five cases of Laryngeal Papilloma.

With respect to Dr. Francis' own remarks, there is not much that requires comment in this judicious compendium of treatment, but I may say that I am in the habit of treating the necks of the slowly recurrent kinds, after removal, with a caustic. The caustic producing least reaction is undoubtedly the electric point, but the careful application of a small chromic acid bead is more satisfactory, inasmuch as this substance is more penetrating. It requires, however, extreme caution; and the subsequent use of a mop or spray of sodic bicarbonate is necessary. I have been so far fortunate in the use of this caustic as to have had no recurrences after its use.

In the case of large laryngeal growths, I think speedy removal much more important than to avoid inflammation. The largest growth I ever removed, a fibroma of the size of a small walnut, was all but choking the unhappy subject; and its removal was effected without subsequent inflammation of any degree whatever.

I am, sir, yours, &c.,
W. F. QUAIFE, B.A., M.B., &c.

197 Liverpool-street, Hyde Park, Sydney,
April 24, 1895.

MEDICAL ADVERTISING.

(To the Editor of The Australasian Medical Gazette.)

SIR,—The accompanying advertisement, which appeared in the *Armidale Chronicle* of March 6, does not call for comment by me; but will, I trust, be animated upon by you as it deserves.

I am, &c.,

W. MURRAY, M.B., &c.

"Tenby," Armidale, April 30.

From the *Armidale Chronicle*, March 6, 1895:—

TO EYE, EAR, AND THROAT PATIENTS.

DR. SCHWARZBACH, of Sydney (Registered), having been invited to visit Armidale Professionally, may be consulted at KICKHAM'S IMPERIAL HOTEL, ARMIDALE, from MONDAY MORNING, MARCH 11th, until FRIDAY EVENING, March 15th.

(To the Editor of the Australasian Medical Gazette.)

DEAR SIR,—I have received a letter from the hon. secretary of our Branch of the B.M.A., inquiring about the publication of a professional card in some country paper a few months ago. In case you should have been requested to publish the advertisement referred to, I think it would be but fair, and in accord with professional usage and courtesy, to make public the copy of my answer at the same time with the accusation.

Yours faithfully,

B. SCHWARZBACH.

Sydney, May 10th.

[COPY.]

TO THE HON. SECRETARY OF THE N.S.W. BRANCH OF THE B.M.A.

Dear Sir,—In answer to your inquiry of the 8th inst., I beg to state that the advertisement you refer to was inserted in the *Armidale papers* with my knowledge and consent. With the tenor of the local paragraph I have nothing to do.

I was not aware that the rules of the B.M.A. forbid the publication of a modest card, which, without puffing or blowing, simply draws attention to a professional visit of the advertiser. Such publications are to my knowledge conformable with the custom in most Australian country towns, and are certainly of a less insinuating nature than the indirect advertisements of members of the profession, of whom I could mention a very large number. I know, for instance, that *Armidale papers* often draw attention even to minor operations of a Dr. Murray, the particulars of which could only have been ascertained through best authority.

If by article thirty-six of the B.M.A. I am expected to refrain from publishing in the future a similar card, I would beg to tender my resignation as a member of the Association; because, in following an invitation from a distant part of the colony, I cannot believe it improper to inform patients of that or neighbouring districts who desire to consult me that they have an opportunity to do so without coming to Sydney for the purpose. I may be wrong, but I have always reserved, and wish to continue to reserve, to myself the freedom of my actions, to which I have adhered for more than twenty years, and which I believe are not in conflict with the customary practice in the colonies.

Yours faithfully,

B. SCHWARZBACH.

College-street, May 10th.

THE EDITORSHIP OF THE A. M. GAZETTE.

(To the Editor of the Australasian Medical Gazette.)

SIR,—As a rule, I keep out of newspaper correspondences; still, I am minded in this case, in no unkindly spirit, to make a few observations on Dr. Huxtable's letter. With regard to the first part, I have only to say that Dr. Huxtable would have consulted his own reputation for large-mindedness best by avoiding further discussion on the steps which led him to the extremely wise and proper course he took. An onlooker can only wish that he had been led to a knowledge of what was best all round a little earlier, and is satisfied that he did well, without seeking to know the intricate wherefore.

For the latter part of the letter—I am sorry if Dr. Huxtable feels personally aggrieved—I regret that he believes, in spite of my "thrice-reiterated assurance to the contrary," made at the time, that my remark about the collection of the ballot-papers contained "an imputation of the grossest kind." If a man is manifestly determined to construe evilly an innocent expression, and not to cease from hugging a grievance, I fear a fourth denial of imputation or innuendo on my part will avail nothing to clear his mind of self-made mista.

Dr. Huxtable has something to say on what I did when I was Secretary. The conditions are not parallel. In that Cimmerian time, it is true, I collected the ballot-papers of the Council. Nay, I had to open them as well—for such was the primitive custom in my day (which was, I thought, improper), before nominations or ballot-envelopes were used. Moreover, the articles certainly applied there to the election of such officers, which they did not do the other day to the election of editor—a totally new post. The Council, or, rather, the Chairman, had really a free hand to arrange the collection of the ballot-papers (see Article 39), and it would have been better if they had done what Dr. Huxtable's common sense and ideas of propriety suggested, viz., to have someone, other than one of the two candidates, to collect these papers. I repeat, Sir, that my words meant neither more nor less than as they stand—"that it was certainly improper for one candidate to collect the ballot-papers of another, or his own"—and members, both before and after the utterance of these words, have told me they held the same view.

Dr. Huxtable has told us that much feeling existed on the matter of this election. Although he does not accept my frank assurances re the ballot-paper remark, I accept his on this matter. His own letter is sufficient evidence of it. Dr. Huxtable doubtless knows the feelings of his own heart and mind. The tone, also, of some of Dr. Worrall's remarks, and the manner of their delivery, accentuates this fact—indeed, so strongly, that some of those present at the meeting marked their disapproval of their intensity by an unequivocal adverse demonstration.

And now, Sir, enough of so profitless a discussion. Let us forget, as we ought to forget, these unpleasant passages, and combine to make our journal a success, and to give you our united support and good wishes—a support and good wishes which, let us hope, in spite of hasty speeches and "foolish threats," would have been also the possession of Dr. Huxtable, had he been less wise than his recent action, which we all must applaud, has shown him to be.

Yours faithfully,

R. SCOT-SKIRVING.

Sydney, April 22, 1895.

MAGGOTS.

(To the Editor of The Australasian Medical Gazette.)

SIR.—In the February number of the *Australasian Medical Gazette* Dr. McAdam mentions a case of conjunctivitis caused by maggots; and in the March number Dr. Salter reports some interesting cases in which maggots proved to be at the bottom of the trouble.

On the morning of January 21st of this year, M. Y., *et. 77*, was seen by me at Willunga. He was partly under the influence of alcohol, and had been drinking rather freely for several days before. He complained of some "itching in the right eye." On examination, there was a rounded rodent ulcer about the size of a sixpenny piece. This was situated at inner corner of right upper eyelid, and had been present for about ten years. It had not ulcerated through the whole thickness of the lid. Both lids were red and very much swollen, and glued together. After bathing with warm boracic acid lotion, the lids were separated, and twenty-three maggots, which must have been several days old, were removed with a pair of dissecting forceps. The conjunctiva was intensely inflamed, but there was no ulceration. In three or four days the swelling and conjunctivitis had almost disappeared.

On another occasion five maggots were extracted from a boy's ear, from which there had been a foetid discharge for some time.

Yours, &c.,

A. E. J. RUSSELL, M.B., Ch.B., Adel.
Hackney, near Adelaide, 1895.

REVIEWS.

HEART STUDIES, CHIEFLY CLINICAL. I.—THE PULSE SENSATIONS: A STUDY IN TACTILE SPHYGMOLOGY. By William Ewart, M.D. (Cantab.), F.R.C.P., Lond., M.R.C.S.; Physician to St. George's Hospital, and to the Belgrave Hospital for Children, &c. London: Baillière, Tindall and Cox, King William-street, Strand, 1894 Sydney: L. Bruck. Price, 15s.; by post, 16s.

WE regret that the review of this splendid work has been so long delayed. The abstruse nature of the writings, dealing as they do with a subject that has never before been handled in similar fashion, made it impossible to do less than study the work page by page, in order to grasp the objects which the author desired to emphasise. The book is one of the most scientific medical works ever published, and bears evidence on every page of the literary ability, erudition and practical physiological and clinical experiences of the writer.

The chief object of the work is vindication of tactile exploration of the pulse as a means of scientific analysis. The pathological aspect of the matter has not been considered in this volume, which appears to be one of a series that the author has in preparation.

It is put forward as a postulate by the author "that the *tactus* felt by the finger is identical with the summit of the pulse-wave, as displayed in the sphygmogram." Size, strength, rate, and consistence have always been within the competence of the finger. The nature of the pulse-wave, its relative time and its direction, were new subjects for tactile study. "It is chiefly in this direction that new ground has been broken."

Taken as a whole, the work is a most fascinating physiological study, and has the merit of being distinctly original. The author will, however, have to

pardon us if we say that we look forward with greater interest to the next instalment of his writings, which will contain the results of his investigations into pathological conditions of the pulse. That is what concerns general practitioners out here most, we presume.

TRAVAUX D'ELECTROTHERAPIE GYNECOLOGIQUE VOL. I.—*Archives semestrielles d'électrothérapie gynécologique, Fondées et publiées par le Dr. G. Apostoli, Vice-Président de la Société Française d'électrothérapie, etc. Paris: Société d'Éditions Scientifiques, 4 Rue Antoine—Dubois, 1894.*

ONE of the most unique works ever published in the domain of medicine lies before us. It is a volume of 770 pp., in French, dealing with gynecological electrotherapeutics, and more especially with the method with which the name of Apostoli has become associated, namely, the treatment of uterine fibroids without the use of the knife. At first sight it might be considered egotistical on the editor's part (Apostoli's) to bring out an archive devoted exclusively to himself and his domain, although we have such a "one-man archive" of surgery in Great Britain, and yet nobody would accuse Jonathan Hutchinson of egotism. But on going into the material we find that it is a collection of all the best work reported upon by authors and operators of world-wide repute, translated without abridgment from the original books and papers by friends and pupils of Apostoli, into French, and edited by himself, so that nothing of any value bearing upon the subject he has striven so hard to place before the profession in a good light, may be lost to those of his countrymen who know no other language besides their own. Not a line of the editor's own writings appears in this volume, which is shortly to be followed by another, but it opens with the works of Englishmen, of whom the most illustrious of all, the Keiths, father and son, and Sir T. Spencer Wells, have the first 148 pp. all to themselves. Then follows the whole of the discussion which took place at Brighton, May 12th, 1888, on a paper of Wells, which Apostoli heard read, and replied to, "On the treatment of uterine affections by electricity;" the speeches of Playfair, Aveling, Ingles, Parsons, Heywood Smith, Travers, Skene Keith, and others, are well worthy of perusal. Needless to say that the whole of the works here translated and presented in collective form for the first time in medical history, give to the method of Apostoli the greatest praise. If it be quite true, as the Keiths have said in no undetermined tone, that the method of Apostoli has replaced hysterectomy, that it does not risk the life of the patient nor mutilate her terribly for life, and "that it is the veritable treatment for fibromata of the uterus," then it is justifiable for Apostoli to say, as he does in his preface to this great work, that it is only those who are ignorant of the elements of physics that seriously oppose such a well-founded treatment, and that the operator who, in the face of all the evidence brought forward against hysterectomy, persists in operating, is moved thereto by self-interest only. Spencer Wells says: "Dr. T. Keith's successes (in 106 cases) have been simply magnificent," and quotes Keith as saying that: "My firm conviction is that it would be committing a criminal act to advise one of my patients to risk her life by operation whilst Apostoli's treatment is to hand." And yet at a discussion in New South Wales upon two cases of hysterectomy recently brought forward with a mortality of 50 per cent. (the fatal case being admitted to be one of "surgical kidney," with albuminuria, diagnosed, *avant operation*, one speaker said: "Drugs appear to have no effect, neither does Apostoli's method of

treatment!" Neither does it appear to have any effect if a man writes about a new method of treatment, which does not endanger life, for ten whole years of his life (Apostoli's first Memoire appeared in July, 1884, *Sur un nouveau traitement électrique des tumeurs fibreuses de l'utérus*, and was also read at the Copenhagen Congress in the following August), travels to countries other than his own to demonstrate the *modus operandi*, and enlists in his service such men as the Keiths, Spencer Wells, Frazier Wright (Simpson's clinic), R. Milne Murray, Horatio R. Bigelow, Ephraim Cutter, Paul Munde, J. H. Kellogg, Basile Massin (Russian clinic of Slaviansky), Klein, Engelmann, Ludwig Mandl (clinic of Chrobak, Vienna), Laforest (of Montreal), all of whom have, by their writings, testified to the efficacy of the treatment, and its conservatism and humanity. Apostoli will require no further monument to commemorate his name and discoveries; the testimony contained in the volume of archives now under review will outlive time, and is a touching instance of the cosmopolitan character of our noble profession, when its principles are carried out in the true spirit of "occasional self-effacement."

Our readers interested in gynecology should lose no time in possessing themselves of a copy of this valuable work, which, in addition to the works of English, American, and Canadian observers, contains translations from original papers in Russian, Italian, German, Danish, Polish, and Hungarian. Its publication has raised gynecological electro-therapeutics into the front rank of strictly scientific treatments, and we trust that all future volumes will be edited in the same happy style, and will keep intact the modesty of the editor, who really has good cause to be proud of the success that has at last attended his efforts.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers Da Costa, M.D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia, and Chief Assistant Surgeon, Jefferson Medical College Hospital, etc. 809 p.p. Philadelphia: W. B. Saunders, 925 Walnut-street, 1894.

THIS is another volume of *Saunders's New Aid Series*, which seem to enjoy much popularity in the States amongst undergraduates. It is simply a *rechauffé* of everything relating to surgery that has been written about for the last 20 years, crammed full of small illustrations, most of which are indiscriminately taken from standard works on surgery, and which are merely of use in diverting the mind from the dreadful monotony of the text. The work must have been written at express speed, and bristles with inaccuracies, which are however, laid down with dogmatic precision, and are apt, therefore, to escape immediate recognition. *Colles' fracture* is described as causing a "silverfork, deformity." Why not "dinner-fork" deformity, seeing that it is the shape of the instrument and not its metal that the expression is derived from? *Hydatid disease* is thus dealt with at p. 223:—"Hydatid cysts occur particularly among people who live shut up with dogs, as is the case in Iceland. The parasite is swallowed with the food and is taken up by the stomach-veins and penetrates the intestine and peritoneum to find a nest in some neighbouring or distant organ or tissue. Open these cysts, scrape, aseptize, and pack with iodoform gauze." That is all. Australia does not exist as far as the author is concerned; we get hydatid disease here very frequently, although we do not, as a rule, "live shut up with dogs." And the question of operation, which agitates successive intercolonial congresses of medicine in Australasia, does not trouble

Dr. Da Costa in the slightest. He simply opens these cysts, *scrapes* (what?), aseptizes and packs with iodoform gauze! We should very much like to know how many cysts Dr. Da Costa has ever operated upon, or where he has seen this very simple procedure adopted with success. As in the instance quoted, so all through the book, the most serious surgical affections are passed over with a few strokes of the pen. Pathology, etiology and treatment, all are dismissed with a few cut-and-dried phrases; and yet the work claims to be of use to students who are about to enter into practice, with all the responsibilities upon their shoulders that matters of life and death entail upon practitioners of medicine. We find it impossible to recommend works of such a frivolous character to our readers for their serious consideration, although we say so with regret.

THE URINE AND CLINICAL CHEMISTRY OF THE GASTRIC CONTENTS, THE COMMON POISONS AND THE MILK: By J. W. Holland, M.D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College of Philadelphia. Philadelphia: P. Blakiston, Son and Co., 1,012 Walnut-street, 1895. Sydney: L. Bruck. Price 4s.

THIS handy volume, arranged in note-book form, and interleaved with blank sheets for notes, is intended for use in the laboratory by students and others. It contains in a condensed form all that it is required to know concerning the normal and pathological constituents of the urine, with the respective tests for them, as well as for the determination of the amount of poison, hydrochloric acid, &c., or others matters found in the gastric contents, for either diagnosis or treatment, which it is necessary now-a-days to learn in order to be in the van of modern scientific knowledge. The matter is collated from the works of the most advanced writers on the different subjects, and is presented in very readable type. There has been a void in medical notebook literature, which is now amply filled by the work of Dr. Holland.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during March to every 1,000 of the population was 2·62, and of deaths 1·04; 93 deaths, of 21 per cent. of the total deaths, occurred in public institutions. The deaths of children under five years of age during the month were 190, or 43·28 per cent. of the total, 134 being under the age of one year. Five deaths of child-bearing women took place during the month, or one death of a woman to every 222 births recorded.

AT the forty-fourth annual commemoration of the Sydney University, which was held on April 20, the following degrees in medicine were conferred:—M.D. (Doctor of Medicine)—Grafton Elliott Smith, M.B., Ch.M. (medal), Cyril Ernest Corlette, M.B., Ch.M. M.B. (Bachelor of Medicine)—George Reginald Percy Hall, B.Sc. (second-class honours), Michael O'Gorman Hughes, B.A., B.Sc. (second-class honours), John William Jackson (second-class honours), Frederick Henry Cox, Henry St. Clair Fordyce, Joseph Albert Goldsmid, Graham Ford Rutter, B.A., B.Sc., Ernest James T. Spark, William Bradbridge Studdy. Ch.M. (Master of Surgery)—Henry St. Clair Fordyce, George Reginald Percy Hall, B.Sc., John William Jackson, Graham Ford Rutter, B.A., B.Sc., Ernest James T. Spark, William Bradbridge Studdy.

THE total number of medical students at the Sydney University during 1894 was 119.

At a meeting of the Medical Section of the Royal Society of N.S.W. held in Sydney on April 19th the following gentlemen were elected officers for the ensuing year:—Chairman, Dr. W. H. Goode, M.A.; hon. secretaries, Dr. G. E. Rennie, B.A., and Dr. C. J. Martin, B.Sc.; committee, Dr. Sydney Jones, Dr. Cecil Purser, Dr. Shewen, and the Hon. Dr. H. N. MacLaurin, M.L.C. The dates fixed for the meetings were June 21, August 16, and October 18.

JOHN GRAHAM BLYTH, L.R.C.P. Ed. 1882, L.R.C.S. I. 1880, died on April 22nd at the Prince Alfred Hospital, Sydney, of consumption, aged 41.

JAMES MITCHELL, M.B., Ch.M. Aberd. 1884, who had been practising at Narrandera for the last ten years, died at his residence on April 21st, after a short illness. The deceased gentleman held the appointments of medical officer to the local hospital and also Government medical officer for the district.

DR. B. BOHRESMANN, formerly of the Little Bay Coast Hospital, has been appointed house surgeon of the Sydney Hospital for Sick Children, in the place of Dr. Kinross, resigned.

DR. E. H. BYRNE, late of Dalby (Q.), has commenced practice in Norton-street, Leichhardt, a suburb of Sydney.

DR. M. L. CAMERON, late of the Manning River, has settled at Grafton.

DR. C. P. B. CLUBBE has been appointed hon. surgeon to the Prince Alfred Hospital, in the place of Dr. Twynam, resigned, and also Lecturer in Clinical Surgery at the Sydney University.

DR. A. CROMWELL and H. ROBERTS were passengers for England by the R.M.S. "Orient."

DR. E. Z. DAVIES, a young Melbourne graduate, has commenced practice at Lake Cudgellico.

DR. W. S. DOBBIN has removed from Deniliquin to Narrandera.

DR. N. P. ELLIOTT, late of Summer Hill (Sydney), and formerly of Brunswick (Vic.), has commenced practice in London, at 19 Croudace-road, Fulham.

DR. G. GORE GILLON, late of Wellington (N.Z.), has entered into partnership with Dr. G. E. Twynam, of Darlinghurst, Sydney.

DR. JAS. GRAHAM has been appointed hon. assistant physician, Dr. E. T. Thring hon. assistant gynaecological surgeon, and Dr. G. L. Murray resident anaesthetist and registrar at the Prince Alfred Hospital, Sydney.

DR. T. A. GREEN has removed from Dulwich Hill to Manly.

DR. G. R. P. HALL, M. O'G. Hughes, J. W. Jackson, and W. B. Studdy have been elected resident medical officers at the Prince Alfred Hospital, Sydney.

DR. J. W. HART has removed from Coolah to Barraba, he having been appointed surgeon to the local hospital, in the place of Dr. Luker, resigned.

DR. E. R. KAVANAGH, late of Dungog, and formerly of Junee, has gone Home.

DR. J. A. LANGDON has settled at Aberdeen.

DR. H. B. LUDLOW has removed from Newcastle to Quirindi.

DR. C. D. MC CARTHY has removed from Burrowa to Narrandera.

DR. J. SERVICE, late of Newtown, returned to the colony by the R.M.S. "Victoria."

DR. R. SIDES, of Bourke, is going away on a twelve months' holiday, and his practice will be carried on for that period by Dr. C. H. Scott, of Penrith; and during Dr. Scott's absence from Penrith his practice will be carried on by Dr. Pym, late of Braidwood.

DR. S. STEPHENS, formerly of the A.M.P. Society, has succeeded to Dr. Boodle's practice at Walcha.

DR. P. T. THANE, of Yass, left for England by the R.M.S. "Orient." Dr. Thane will be absent for eight months, and in the meantime his practice will be carried on by Dr. Doolan, late of St. Vincent's Hospital, Sydney.

THE National Leprosy Commission has awarded a prize of 60 guineas to Dr. Ashburton Thompson, of Sydney, for his researches into the disease of leprosy.

NEW ZEALAND.

THE proportion of deaths registered during March to every 1,000 of the population was 1.22 for Auckland and suburbs, 1.29 for Wellington with suburbs, 1.04 for Christchurch and suburbs, and 0.94 for Dunedin and suburbs. The total births in these four boroughs during March amounted to 842, against 400 in February. The deaths in March were 192, to which males contributed 101 and females 92. Eighty of the deaths were of children under 5 years of age, being 41.67 per cent. of the whole number; 59 of these were under 1 year of age.

DR. W. FELL, of Wellington, has left for England on a six months' holiday.

DR. GEO. HODGES has removed from Port Chalmers to Mosgiel.

DR. F. T. KING has been appointed medical superintendent, and Dr. Geo. Craig Assistant Medical Officer of the Lunatic Asylum at Seacliff, near Dunedin.

DR. JAS. MASON, a recent arrival, has commenced practice at Otaki, 47 miles north of Wellington.

DR. MORRIS, of Cromwell, had one of his arms broken by being thrown out of his buggy. He is progressing favourably.

DR. H. R. SLOAN, a recent arrival, has settled at Hawera.

QUEENSLAND.

A SURGEON is required for the Springsure Hospital, salary £250 p.a., private practice allowed. Applications, endorsed "Applications for Medical Officership," will be received up to the 5th of June by the secretary, Mr. G. B. Milliken, at Springsure.

A SURGEON is wanted for the District Hospital at Herberton, salary £250 p.a.; other appointments, £50; private practice allowed. Applications, with testimonials, must be sent in up to June 14th to the secretary, Mr. John Cairns.

ANOTHER European, a miner, *et.* about fifty, has been found suffering from leprosy. He has been removed to the leper station at Dunwich.

At the meeting of the Central Board of Health a draft setting forth in popular language the decision of the Indian Commission on Leprosy was approved, and ordered to be widely circulated.

SOUTH AUSTRALIA.

DR. J. I. SANGSTER, of Burra, has left on a trip to England.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during March to every 1,000 of the population was 31.84, and of deaths 15.58. Males contributed 53 per cent. and females 47 per cent. to the mortality of the month. Children under five years of age contributed 37 per cent. to that mortality, as against 42 per cent. in March, 1894. One hundred and thirty deaths, or 22 per cent. of the whole, took place in public institutions.

DR. A. C. F. HALFORD has been appointed an honorary assistant demonstrator of pathology; Dr. T. Hodgson and Dr. W. A. Wood, honorary assistant demonstrators of anatomy; and Dr. F. D. Bird a lecturer on surgery at the Melbourne University.

AT the Melbourne District Court, on May 2nd, Madame Emily Seidel was fined £10, with £3 8s. costs, for pretending to be a medical practitioner, contrary to section 11 of the Medical Act.

ALEXANDER SELLAR, M.B., Ch.M. Aberd. 1890, L. Mid. R.C.S. Irel. 1891, late of Nhill and Lorrquon, died of phthisis at Floraston Private Hospital, Victoria-parade, Collingwood, near Melbourne, on April 14, aged thirty years.

DR. V. H. BARR has commenced practice at Coalville.

DR. J. E. BUTCHART has succeeded to the practice of Dr. Moss, at Avenel.

DR. W. DIAMOND has left Omeo for New Zealand.

DR. GILBEY, of Canterbury, has left on a visit to the old country. During his absence Dr. Murdoch Mackenzie, late of Korumburra, will carry on his practice.

DR. P. GUINAUD has entered into partnership with Dr. W. M'Gee, at Korumburra.

DR. W. C. MAOKNIGHT has removed from Nhill to Carisbrook.

DR. H. P. MARTELL and Dr. Margaret Whyte, of Moonee Ponds, have entered into partnership for life.

DR. M. J. A. MOSS, late of Avenel, has commenced practice at Richmond, a suburb of Melbourne.

DR. T. ROWAN, of Melbourne, left for England by the R.M.S. "Australia."

DR. T. SHANASY has commenced practice at Heywood.

DR. B. K. SHUTER, late of the Melbourne and Victorian Eye and Ear Hospital, has left for South Australia.

WESTERN AUSTRALIA.

DR. S. B. DAVIS, of Beverley, has been appointed Resident Medical Officer of the Toodyay district, to reside at Newcastle, in the place of Dr. Mayhew, retired on pension.

DR. T. H. ROBINSON, of Albany, has been appointed acting-Resident Medical and Quarantine Officer at Albany, during the absence on leave of Dr. Ingoldby.

DR. A. T. WHITE has been appointed to discharge the several official duties of Dr. J. W. Hope, Resident Medical Officer, &c., at Fremantle, during his temporary or unavoidable absence.

MEDICAL APPOINTMENTS.

M'Gee, William, L.K.Q.C.P., to be Officer of Health for the shire of Poowong and Jeetho (Vic.).

Maoknight, William Crawford, M.B., Ch.M. Ed., to be Health Officer for Carisbrook (Vic.).

Sangster, John Ikin, M.B., B.S. Adel., to be a public vaccinator for the district of Burra (S.A.).

Sinclair, Robert Fraser, M.B., M.S. Ed., to be Government Medical Officer and Vaccinator for the district of Brewarrina (N.S.W.).

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

BRAY.—On March 5, at Euroa, Victoria, the wife of P. Dean Bray, M.R.O.S. Eng., of a daughter.

COOPER.—On March 15, at the Hotel Australia, Sydney, the wife of Austin N. Cooper, F.R.C.S.I., of Tamworth, of a daughter.

GARDE.—On February 23, at Maryborough, Victoria, the wife of Dr. G. E. Garde, of a son.

HORNE.—On February 16, at Traralgon, Vic. the wife of H. R. Horne, L.R.C.P. Ed., of a daughter.

HUXTABLE.—At 26 College-street, Sydney, the wife of L. R. Huxtable, of a daughter.

LIDDLE.—On April 13, at Surrey Hills (Vic.), the wife of Percy H. Liddle, M.B., B.S., M.R.O.S., of a daughter.

ROSS.—On April 10, at Dimboola (Vic.), the wife of W. Chisholm Ross, M.B., Ch.B., of a son.

SMITH.—On March 24, at Clare (S.A.), the wife of Otto Wren Smith, M.D., of a daughter.

SUTTON.—On April 26, at Terang (Vic.), the wife of Dr. C. S. Sutton, of a daughter.

WHITTON.—On February 23, at Oamaru, N.Z., the wife of Dr. James Whitton, of a daughter.

MARRIAGES.

DAVIES—OGILVY.—On March 13, at St. Peter's Church, Leongatha, Vic., Leslie Davies, M.B. of Ch. B. to Eva Margaretta, eldest daughter of Charles Ogilvy, Leongatha.

ELLIOTT—CURTIS.—On March 7, Nicholas F. Elliott, M.R.C.S. Eng., L.R.C.P. Ed., late of Brunswick (Vic.) and Sydney, to Frances Curtis, second daughter of F. A. Highton, Esq., of "Harrington," Acton W.

ERSON—HUCKELL.—On March 4, at Perth, W.A., by the Rev. J. Greerer, Dr. Leger Eerson, to Florence Isabel Margherita Huckell, eldest daughter of J. C. Huckell, of St. Kilda (Vic.).

FLEMING—DRABBLE.—On February 19, at the Presbyterian Church, Winton, N.Z., William Alexander Fleming, M.B., Ch.M., Balclutha, to Ethel, second daughter of Frederic Drabble, Oreti Plains, Southland.

JONES—LOOKWOOD.—On March 11, by the Rev. J. Reid, Walter W. S. Jones, L.R.O.S. Ireland, of East Melbourne, to Ada, second daughter of the late Thomas Lookwood, of Geelong, Vic.

LILLIE—LANGEN.—On February 23, 1895, at Cologne, Germany, H. Lillie, M.D. (late of Moore, N.S.W.) and Martha Langen, daughter of the late Albert Langen, of Cologne.

MACCORMICK—CROPPER.—On February 26, at All Saints', Woolahra, Alexander MacCormick, M.D., Sydney, to Ada Fannie Hare, third daughter of Charles Cropper.

MARTELL—WHYTE.—On April 9, at East Melbourne, by the Rev. Dr. Strong, Horatio Percy Martell, Moonee Ponds, to Margaret, second daughter of the late Patrick Whyte, East Melbourne.

PARRY—TORNAROS.—On February 19, at St. Paul's, Maryborough, Q., Albert A. Parry, F.R.C.S. Eng., of Rookhampton, to Marie, third daughter of Captain A. Tornaros, of Maryborough, Queensland.

SYME—HORNE.—On February 13, at St. John's Church, Launceston, Arthur H. Syme, M.R.O.S. Eng., L.R.C.P., of Lilydale, Vic., to Amy, daughter of George Horne, Launceston.

ZIOHY-WOJNARSKI—BRIND.—On April 17, at the Cathedral Church, Ballarat (Vic.), Victor Ziohy-Wojnarski, M.B. of Ch. B., of North Melbourne, to Gertrude Mary, only daughter of Henry Brind, Ballarat.

DEATH.

HORNE.—On March 2, at Traralgon, Vic., Margaret Ross, the wife of H. R. Horne, L.R.C.P. Ed., aged 20 years.

STATISTICS OF THE AUSTRALASIAN COLONIES.

I.—ESTIMATED POPULATION,* 1894.

Colony.	On the 31st December.					Mean Population 1894 (both sexes).
	Males.	Females.	Total.	Females to 100 Males.	Persons to the square mile.	
Victoria	607,260	571,844	1,179,104	94·17	18·42	1,174,780
New South Wales	672,950	578,500	1,251,450	85·96	4·05	1,237,410
Queensland	250,834	194,321	445,155	77·47	·67	438,727
South Australia—Proper	179,442	168,278	347,720	93·78	·92	344,849
Ditto Northern Territory ..	4,325	357	4,682	8·25	·01	4,789
Western Australia	55,072	27,000	82,072	49·03	·08	78,568
Total	1,769,883	1,540,300	3,310,183	87·03	1·12	3,274,073
Tasmania	83,266	74,190	157,456	89·10	5·97	155,940
New Zealand	363,763	322,365	686,128	88·62	6·57	679,196
Grand Total	2,216,912	1,936,855	4,153,767	87·37	1·35	4,109,209

*Exclusive of Aborigines, except in the case of Victoria and New South Wales. In the former colony 565, and in the latter 8,280, were enumerated at the Census. The Maoris in New Zealand, who numbered 41,928 in 1891, are also excluded.

II.—MARRIAGES, BIRTHS, AND DEATHS, 1894.

Colony.	Number of—						
	Marriages.	Births of—			Deaths of—		
		Males.	Females.	Total.	Males.	Females.	Total.
Victoria	7,020	17,504	16,759	34,263	8,900	6,534	15,434
New South Wales	7,652	20,087	18,898	38,985	8,754	6,478	15,232
Queensland	2,502	7,207	6,770	13,977	3,367	1,931	5,298
South Australia—Proper	2,094	5,407	5,069	10,476	2,184	1,817	4,001
Ditto Northern Territory ...	5	16	7	23	39	1	40
Western Australia	482	1,109	1,014	2,123	755	326	1,081
Total	19,755	51,280	48,517	99,797	23,999	17,082	41,081
Tasmania	847	2,473	2,379	4,852	1,102	836	1,938
New Zealand	4,130	9,472	9,056	18,528	4,011	2,907	6,918
Grand total	24,732	63,225	59,952	123,177	29,112	20,825	49,937

Colony.	Per 1,000 of the Population.			Males per 100 Females.		Excess of Births over Deaths.	
	Marriages.	Births.	Deaths.	Born.	Died.	Numerical.	Centesimal
Victoria	5·98	29·17	13·14	104·45	136·21	18,829	122·00
New South Wales	6·18	31·46	12·31	106·03	135·24	23,708	155·70
Queensland	5·70	31·86	12·08	106·45	174·36	8,679	163·82
South Australia—Proper	6·07	30·38	11·60	106·67	120·20	6,475	161·83
Ditto Northern Territory ...	1·04	4·80	8·85	228·57	3,900·00	— 17	— 42·50
Western Australia	6·55	28·85	14·69	109·37	281·60	1,042	96·39
Total	6·08	30·48	12·55	105·69	140·49	58,716	142·93
Tasmania	5·43	31·11	12·43	103·95	131·82	2,914	150·36
New Zealand	6·08	27·28	10·19	104·59	137·98	11,610	167·82
Grand Total	6·02	29·98	12·15	105·46	139·79	73,240	146·66

III. AUSTRALASIAN CAPITALS.—1894.

Chief Cities, including Suburbs.	Mean Population.	Births.		Deaths.						Excess of Births over Deaths.
		Total Number.	Per 1,000 of popu- lation.	Total Number.	Per 1,000 of Popu- lation.	Under 1 year.		Under 5 years.		
						Number.	Per 1,000 Births.	Number.	Per cent. of Total Deaths.	
Sydney	422,315	12,367	31·65	5,961	14·12	1,784	133	2,475	41·52	7,406
Melbourne	442,110	13,672	30·92	6,884	15·53	1,673	122	2,309	33·64	6,808
Brisbane	94,000	3,261	34·69	1,172	12·47	345	106	523	44·62	2,089
Adelaide	141,606	4,340	30·65	1,960	13·84	460	106	642	32·76	2,380
Perth... ..	14,063	552	39·25	306	21·76	111	201	149	48·69	246
Hobart	34,368	1,034	30·09	637	18·53	113	109	149	23·39	897
Wellington	36,508	1,101	28·60	440	11·43	104	94	137	31·14	661

ORIGINAL ARTICLES.

POSTERIOR SCLEROSIS AND PERNICIOUS ANÆMIA.

By ANGEL MONEY, M.D., F.R.C.P., LOND.

THERE are cases of posterior sclerosis occurring in women about the grand climacteric, which run a course of about two years, during which an anæmia gradually increases, and finally causes death, before the degeneration of the posterior columns can be said to have reached a very advanced stage. I have notes of three such cases which have occurred in my practice during the last six years. The one last seen is so typical that it will be well briefly to outline its clinical history.

The patient was first seen on September 20; a female, aged fifty. She complained that for twelve months or more she experienced "terrible strange feelings; itching in the left foot; grip around the waist; no natural feeling in the limbs; shivering feeling between the flesh and skin; wretchedness from morning till night; swelling about the stomach." She could stand with her eyes shut for a moment, but then nearly fell; could walk badly with the eyes shut, but felt very insecure; no lightning pains; no vomiting; some deafness in both ears, watch heard indistinctly five inches from either ear. She had never had children, nor any miscarriages. The pupils reacted sluggishly to light; more readily in the act of accommodation; no optic-nerve atrophy; no retinal hæmorrhages; the knee-jerk was absolutely lost on both sides; she could not feel a touch at all on the lower third of the shin of either side; a prick in the same place was felt as a burning sensation at least two seconds after the prick had been made. She felt as if walking on wool, but sensation to touch, pain, and temperature appeared to be normal on the soles of both feet. She was moderately anæmic; hæmoglobinometer fifty per cent.; red blood corpuscles sixty per cent.; no poikilocytosis; no excess of white cells. A trace of albumen in the urine, sp. gr. 1022; no sugar; deposit of lithates; no excessive pigmentation; acidity above the normal. The anæmia progressed rapidly after December, and she died in coma on February 20. Throughout these five months she was very miserable, constantly complaining of the numb feeling in the soles, grip about the waist, and swelling of the stomach. She said her smelling and taste had gone, and that everything tasted like "drugs." She was treated with but little benefit by many drugs, chief amongst which

were arsenic, iron, iodides, nitro-glycerine, zinc, strychnine, and blisters to the spine; the last of which always eased her distressing sensations. Thyroid tabloids were also used for several weeks. For two months bone marrow was administered.

On March 26th, Dr. J. Taylor read a paper on this subject before the Royal Medical and Chirurgical Society, and an abstract of it appears in the *B. M. Journal* of March 30th. He records two cases. The first, a woman aged 50, developed signs of lateral sclerosis whilst under observation. In my three cases, all in women, there was a considerable anæmia, and their ages ranged from 45 to 50. The symptoms of which they complained were not those usually experienced by the merely anæmic, even when allowance is made for the fact that functional neuroses are common accompaniments of anæmia. It is perfectly possible that hæmorrhages into the spinal cord may be followed by sclerosis; but against this it may be noted that the degree of anæmia seems not to be such as would give rise to spinal hæmorrhages. That anæmia predisposes to the occurrence of optic neuritis may well be imagined in face of the fact that severe optic neuritis has not unfrequently occurred in anæmia. The theory of optic neuritis and other nerve symptoms being due to some poison which may be the result of, or even the cause of, the anæmia must also be considered. At present it seems to me that we ought to be in an entirely speculative mood on the subject. It must be allowed that a moderately progressive posterior sclerosis (and lateral sclerosis) is not unfrequently accompanied by an anæmia which, after progressing slowly, suddenly becomes malignant. So far, we are on safe ground. As to the precise relationship between the cord change and the anæmia, it would be wisest to frame the situation after the usual logical teaching:—(1.) The anæmia may, in some way or other, cause the sclerosis. (2.) The two changes may be the results of some one cause. (3.) The cord change may have set up the anæmia by some unknown blood-regulating mechanism. That the last view is a possible, if not a probable, one will be granted if it is remembered that it seems difficult to say from the clinical history whether the anæmia or the sclerosis were the first to commence, and that profound anæmia has followed shock and other lesions to nervous system in such a manner as to suggest a central origin for the anæmia.

A case which greatly puzzled me was the 8011 of Dr. M——, of Euston Square, London.

He was aged 25 years, and died after an illness extending over a few weeks. He was melancholic; there was some ataxy of gait, the knee-jerks were absent, the pupils reacted not to light, and a very malignant anæmia set in from the exhaustion, of which he died. Unfortunately, no autopsy was allowed. Such a rapid case of pernicious anæmia, if pernicious anæmia it were, I have never seen the parallel to. It might have been tuberculosis, or even enterica, but fever was present only at odd times, and the illness had none of the characteristics of a continued fever.

LOCAL ANÆSTHESIA BY INFILTRATION.

By O. BLOCH, M.D., OF ALBURY, N.S.W.

A GREAT deal of discussion has been lately going on in all parts of the world about the dangers and the respective merits of the various methods of general narcosis. Commissions and committees of inquiry have been formed, statistics have been collected, a vast literature has been shelved on the subject; yet we must confess the clashing—and often diametrically opposite—opinions expressed by learned bodies and individuals have left us just as ignorant as ever about the reasons of deplorable mishaps originating from the use of general anæsthetics, and resulting in the deaths or narrow escapes of patients. Though it appears for the time being that ether is gaining ground against chloroform (for the discussion has practically resolved itself into the advocacy, or otherwise, of either of these two favourite anæsthetics), it cannot be denied that the former has certain limits to its applicability; that its comparatively recent introduction, or, rather, re-introduction, renders the statistics anent its use less comprehensive, and therefore less reliable, than those for chloroform; that its after-effects are productive of lung affections, which have not been sufficiently studied. But, while the practical result of all these discussions is not as satisfactory as might have been expected from the amount of scientific labour spent over the question, they have at least achieved one good result. They have resuscitated in the minds of the medical practitioners, especially the younger ones, the sense of the danger, and therefore of the responsibility, attached to the administration of any general anæsthetic—a sense of responsibility which threatened to be lost in the daily routine of using them in cases where they might be dispensed with. To advise a patient to take chloroform or ether for some trifling operation for our own convenience, or to save the patient

some endurable pain, can certainly not be justified by referring to the statistics which seem to show that only one fatal case occurs in an average of 2,700 of chloroform, or 27,000 (?) of ether. In the first place, I do not at all consider these statistics as reliable*. Secondly, we are still very far from being able to estimate the injuries which may result, directly or indirectly, from the use of either chloroform or ether.† Thirdly, it does not matter in the least to the patient whether he is the unfortunate two-thousandth or twenty-seven thousandth one who may die or be injured by the narcosis, and, though it may be re-assuring to the surgeon from a theoretical point of view that his case is not likely to be the one in 2,700 or 27,000, he has to face the same danger in every case, since we have as yet no means to decide, even by the most minute examination of the patient, whether he will be tolerant of the poison or not. I expressly state that I do not for a moment mean to denounce a careful and judicious use of general anæsthetics. To them is due, next to the introduction of anti- and a-sepsis, the wonderful progress of surgery in the last half century, and, considered from a broad point of view they will do immensely more good to humanity than ever harm can be done through them to the individual; but let it be impressed on the minds of the surgeon that in general narcosis he has, if a useful and convenient, an undoubtedly dangerous helpmate. If the first principle of the healing art, the “nil nocere,” were as conscientiously considered in surgery as it is in medicine, then, no doubt, the only indication for the use of chloroform or ether should be “*that the danger to life and health of the patient arising from his ailment, must be proportionate to that which he might have to undergo if subjected to narcosis.*” The general practitioner, however, will find it very difficult to comply with this thesis in the face of the great popularity which the general narcosis has acquired in our nervous generation. While one portion of our patients, a very small one

*Only on the surmise that the statistics are unreliable is it comprehensible that the death-rate for different countries varies between 1 in 3,000 (Gurit, Germany), and 1 in 1,000 (Silk, England). Silk admits himself that many cases, especially from private practice, are never published, and in Gurit's statistics only 60 surgeons took part against about 17,000 general practitioners and 600 special surgeons practising in Germany. Also, it must be borne in mind that only the deaths from asphyxia or syncope which occur on the operation table are generally ascribed to the anæsthetic, while those occurring to weak patients shortly after go under the heading of “shock,” or “exhaustion.” Which is more likely to fatally affect a patient in low condition—a short and skilfully-performed operation in itself, with a trifling loss of blood, and all reflexes suspended, or the revolution in nearly all his most important organs, with hours of sickness and headache, caused by the narcosis?

†Terrier found in 66, Luther in 95 per cent. of chloroform, albuminuria partly lasting for a considerable time after the narcosis. See also *Medical Annual*, 1896, p. 348.

indeed, would not submit to it to save their lives, others crave for complete exemption of the slightest pain or of seeing blood, and peremptorily demand chloroform for the extraction of a tooth, the removal of a naeuous, or the incision of a whitlow. No wonder then that Silk* enumerates 377 deaths of chloroform between 1882 and 1891 for England alone, and that, if the estimate that about 54,000 narcoses are dispensed in Berlin through one year is correct, 20 deaths should occur within that period, even if the average be not higher than one in 2,700. The more surgery advances, the more numerous the cases of narcosis will become, and the higher will be the absolute death-rate, even if we should find means and ways to lessen the dangers of the individual narcosis by a choice of drug or method. But it is not at all likely that we should be ever able to overcome its danger, for the simple reason that we cannot paralyse the central organ of sensation without influencing the rest of the central organs of vitality, and, while the first may be suspended without danger to life for ever so long, the latter, as respiration and circulation, will not stand suspension for any length of time. Therefore, it is a very urgent claim on modern surgery to find out or follow up such substitutes for general narcosis which, while fulfilling the humane postulate of anaesthesia, will not endanger the health and life of the person for whose benefit they were intended, and any reasonable attempt to do away with a considerable percentage of the more dangerous general narcosis ought to command the sympathy of every surgeon. This is the reason which induced me to introduce to the surgeons of this country a new method of local anaesthesia invented by Dr. C. L. Schleich, of Berlin, exhibited by him during the Congress of German Surgeons at Berlin, 1894, to the most distinguished names of the profession, a method which I had myself the opportunity of testing in over a dozen cases.†

The attempts hitherto made to replace general anaesthesia by a local one have not so far proved a great success. I can pass over, as only of historic interest, the compression of the large nerve trunks (Moore) and forced bandaging, to produce anaesthesia by ischaemia (Liégaud.) The local application of cold, and the hypodermic injections of nervines, especially cocain, however, have proved valuable to a certain extent. The first method, using refrigerating mixtures (Arnott) or fluids of low boiling point (ether,

liquor hollandicus, chloride of ethyl) is only effective as far as the refrigerating process can be carried out. But the circulation of blood will not allow this to any depth, and the process of freezing on a tender or inflamed skin is in itself by no means painless, especially if kept up for any length of time. The superficial application of cocain is certainly very valuable in reducing the superficial reflexes and the sensitiveness of mucous membranes, and, therefore, almost indispensable for manipulations in the throat, nose, and eye; but its hypodermic injection to produce anaesthesia in bloody operations is of a very *limited range* of usefulness indeed. Its influence is restricted to the area where the nerve tissue comes into contact with the solution, and is of very short duration. It is a true poison to the central apparatus, acting as such after absorption; and, as one grain is considered the maximum dose, 20 minims of a 5 per cent., or 50 minims of a 2 per cent. solution, is all we are justified in injecting, so that only a very limited area can be impregnated. In fact, though most people may tolerate a larger dose, severe cases of collapse and even death have been recorded from even smaller amounts. Réclus, who worked out the cocain method to perfection, and only used 1 to 2 per cent. solutions, enumerates eight cases of death from the literature, so that for this reason alone the hypodermic injection of cocain cannot be thought of as a harmless competitor with general narcosis.

The new method, which we may call the *infiltration method*, is based on a perfectly new principle, or rather on two. *It establishes a local oedema in whatever tissue and whatever depth the knife may have to work in.* It uses as a vehicle to bring about this oedema *a fluid which, while not destroying protoplasmic life, and not injurious to the general health, deadens, for the time being, the sensitiveness of, and interrupts the nerve conduction within, the area of infiltration.*

This vehicle is a 0.2 per cent. solution of *ordinary table salt*, to which is added, for reasons to be explained later on, a minimum of narcotics (cocain, morphia or codeia), in a concentration far below the dangerous dose, even though large quantities of the fluid should be injected. While it was known for a long time, especially from the experiments of Professor Liebreich, that many solutions, and even distilled water, produce anaesthesia where they *infiltrate*, living tissue, but only after a preliminary period of hyperaesthesia, and that a 0.7 per cent. solution of chloride of sodium is without perceptible influence on sensibility in similar circumstances, the first being too different from, the latter too similar to, the concentration of the physiological fluids of the

* The Lancet, vol. 1, 1892, May.

† After several preliminary communications in various medical papers (Therapeutische Monatshefte, Jan., 1893, and Sept., 1894) Schleich has discussed the theory and practice of his method in a book ("Schmerzlose Operationen," Berlin, 1894, Jul. Springer).

tissues, this 0.2 per cent. solution does not irritate the nerve tissue on one side, and reduces its sensibility on the other. If a certain area of any tissue is thoroughly infiltrated by a 0.2 per cent. salt solution it becomes anæsthetic, in consequence partly of the specific action of the solution on the nerve tissue, partly in consequence of the combined effects of the ischæmia, compression and local decrease of temperature* produced in the cedematous area. In fact, the 0.2 per cent. salt solution infiltrating an otherwise healthy tissue is in itself sufficient to render it anæsthetic, but as surgical operations have generally to be done in inflamed tissues, where the nerves are *hyperæsthetic*, and the act of injection would be painful in itself, and to prevent after pains a slight addition of narcotics is advisable. Schleich uses three solutions, in which the 0.2 per cent. chloride of sodium solution is combined with cocain-morphia (or codeia) in various strength; the slight addition of carbolic acid is made to keep them aseptic.

Solution	In English measure.					
	I.	II.	III.	I.	II.	III.
Cocain mur. ...	0.2 grm	0.1	0.01 ...	4grs.	2	1-5th
Morph. mur. ...	0.025	0.025	0.005...	$\frac{1}{4}$ "	$\frac{1}{4}$ "	1-10th
Sod. Chlorid....	0.2	0.2	0.2 ...	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$\frac{1}{4}$ "

Aq. destil. (steril.) 100 grm. 4 fl. oz.

adde

Acid carbol. (5 per cent.) gtt. 3

The table salt ought to be heated, the aq. dest. boiled before making up the solution, to ensure asepsis; the cocain and morphia are naturally germ-free.

The solution No. 2 is the one generally used; No. 1 may be used in much-inflamed tissues. No. 3 is very often sufficient and especially useful in protracted operations, when, by using No. 2, the maximum dosis of the narcotics would be approached. It will be seen that about two ounces, or 50 Pravaz syringes of 20m. each of No. 2, or 20 ounces, equal to 500 syringes of No. 3, can be injected before the maximum dosis of cocain (or morphia) is reached, and practically even double the quantity would still be without danger, as we will learn from a more detailed description of the technique, that the whole amount is not injected at once, but in minute quantities at a time, and at least half or two-thirds of the injected fluid is washed away by the blood, or oozes out from the wounds without being absorbed into the system.

Every operation has to begin with the establishment of an cedematous spot, *within* the layers

of healthy skin, i.e., *endermically* in the vicinity of the locus lesionia. The needle of a Pravaz syringe filled with one of the above solutions is inserted *into* (not underneath!) the skin, superficially and as much as possible parallel to the surface, just far enough to cover the slit. By gentle pressure sufficient fluid is driven out to cause a white cedematous spot, a sort of *weal*, to arise. It will be found that within this spot the tissue is perfectly anæsthetic. By re-inserting the needle into the first weal, near its margin, a second weal is established, and so fourth, until a *line of weals* marks the extent and run of the intended incision. (See fig. 1.)

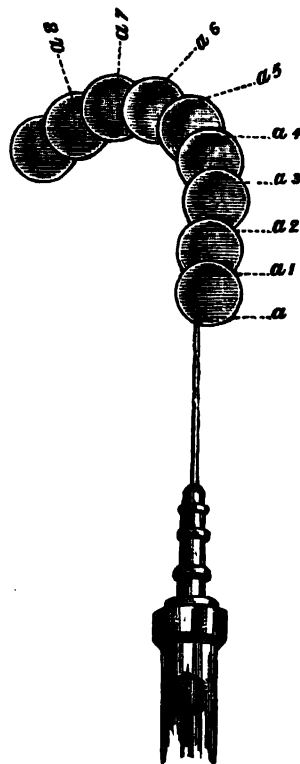


FIG. 1.
SERIES OF 8 WEALS (a-a8, SPOTS FOR THE INSERTION OF THE NEEDLE.

Only the first insertion of the needle is accompanied with the slight pain of a prick, which may startle very nervous patients and children; but even this can be prevented by using the ether spray on the spot of the first injection (which, it must be kept in mind, has always to be done in healthy skin!) or, on mucous membranes, by touching it with concentrated carbolic acid or a small crystal of cocain.* All the following insertions of the needle are

*The cooler the injected fluid, the more effective it is. If the injected solution is of blood temperature, it is of very little efficiency.

perfectly painless, being made within the area of previously-established anæsthesia. Along this line of weals the skin is incised right into the subcutaneous tissue. If it is necessary to go further than skin deep, the subcutaneous tissue is infiltrated in exactly the same way, always taking care that every subsequent injection is made within the area of already infiltrated tissue. Bleeding points can be secured in the usual way; in the case of larger vessels it may be necessary, after gently pressing them between the branches of the artery forceps, to infiltrate the sheath of the vessel before ligaturing it, or to touch it with a drop of concentrated carbolic acid, which will be found sufficient to deaden the sensibility of the fine nerves running inside the coatings of the blood vessels. Once, and for all, it may be pointed out that *every tissue*, whatever its nature may be, can be infiltrated and rendered anæsthetic; easily and with little waste of solution in soft tissues (subcutaneous, muscular, fatty), with greater difficulty and under considerable pressure in sclerotic ones. Even bone can be rendered perfectly anæsthetic by the infiltration of the periosteum, and amputations of fingers, of the forearm and resections of the wrist, have been painlessly performed by circular infiltration of the respective bones. If the stratum within which the operation has to be performed is not too deep, the infiltration can be carried on to it by simply pushing the needle, under continuous expression of fluid, deeper and deeper; or, we infiltrate layer after layer, keeping the margins of the superficial ones apart by sharp or blunt hooks, in the usual way, as we proceed. The time during which the anæsthesia will last may safely be supposed to be 20 to 25 minutes, sufficient for operating in one layer of tissue, but nothing prevents any layer from being reinjected as often as can be done without transgressing the maximum dose of the nerveine. The stitching of a wound may be done painlessly in the original line of superficial weals, or new weals may be established for the purpose. It may be remarked that the infiltration in itself (by compressing the capillaries) prevents a good deal of bleeding; that larger vessels can be easily ligatured as above described; that the infiltrated tissues, far from becoming indistinct, are very plainly defined against each other, so as to afford a good anatomical view and allow neat preparatory work.†

*I can assure that I never felt the necessity of taking this precaution.

†It goes without saying that asepsis can be, and has to be, strictly maintained as usual. The needles are best kept aseptic by keeping them in 5 per cent. carbolic acid, and syringing them out with absolute alcohol and distilled water before using them.

While the above may give a general idea of the infiltration method, there are, of course, many little points to be observed which have to be learnt by practice, and every operation, according to the nature of the ailment and the tissue to be worked upon, presents new features of technique. I can, however, state from my own experience, that there is little difficulty to suit the way of proceeding to the nature of the case. I cannot, of course, describe minutely the technique of all kinds of operations, but I will try to do so for a few that frequently occur to the practitioner, partly from my own experience, partly following the above-quoted work of Dr. Schleich.

We have already seen the proceedings for a simple superficial incision, which forms the first step in most operations. Let us now consider the *enucleation of a superficial tumor*, say a *lipoma* or *atheroma*. For these cases a curved needle is advisable, but I have enucleated a large atheroma quite satisfactorily with the usual Pravaz syringe. We establish a superficial line of weals across the greatest diameter of the tumor, taking care, if the latter rises considerably over the surface of the skin, to draw it to one side while injecting, in order to minimise the steepness of the ascent from the surface of the skin to the tumor. Incision along the marked line of weals. Injection of the solution into the subcutaneous tissue *between* the skin and the capsule of the tumor, first on one side, then on the other. By using a curved needle we can infiltrate the cellular tissue to such an extent that an atheroma may be fairly pushed out through the incision, and quite easily and bluntly detached from its bed. If the tumor be very large (carcinoma of the mamma, big lipomata) this operation may require very large quantities of anæsthetic fluid and very long needles, so that it may not always be possible to finish the operation without resorting to general narcosis.

Radical Operation of Hydrocele.—Æther spray to the lower pole of the tumor, while the skin of the scrotum and perineum is protected by glycerine. Line of weals across the tumor; a few syringes into the subcutis; incision through the skin if necessary; infiltration of the deeper layers until the white, firm tunica vaginalis communis is laid bare. Infiltration of the tunica at the lower pole, where it is opened and part of the contents emitted. Introduction of a director or a finger into the cavity (gently); infiltration of the tunica step by step, using the knife and syringe alternately. Should it be found desirable to extirpate the tunica, partly or *in toto* (radical operation) this can be easily done

now by infiltrating it, starting from the already oedematous parts.

Exactly the same general technique holds good for the opening of any cavity of the body, the pleura or peritoneum taking the place of the tunica in cases of thoracotomy or laparotomy pure and simple, or combined with ovariectomy, herniotomy, gastrotomy, cholecystotomy.* If very extensive adhesions are present it may be necessary, after opening the peritoneum under local anaesthesia, to finish the operation under general narcosis. If the incision has to be made in the linea alba, there is scarcely any difficulty; but if the layers of muscles and fat are very thick these tissues have to be separated by slowly progressing from layer to layer. Intra-peritoneal tumors (of the stomach or an ovary) can be separated from their surroundings by a perfect wall of infiltrated tissue, the first injection being made painless by the application of a drop of concentrated carbolic acid.†

Hæmorrhoids.—For this frequent and painful ailment the method has proved to be of the greatest value. The skin of the anal folds is smoothed out by gentle traction. Establishment of the first weal, either superficially on the mucous lining of the anus itself (after rendering the spot anaesthetic by carbolic acid) or at some distance on the healthy skin of the nates, under ether spray. A line of weals is carried right into the basis of one pile, which is itself infiltrated to an enormous size. Thus rendered anaesthetic, the varix is either burnt off (after being taken between the branches of a pile forceps) or simply cut off by radial, converging incisions at its base, within the anaesthetic area, and the skin immediately united by stitches. If several varices are present each can be treated in the same way, and by starting from different points of its circumference the whole sphincter ani can be rendered so anaesthetic that it admits of sufficient extension to introduce large specula, to treat fissures, to operate on internal piles, either separately or by circular incision of the rectal mucous membrane. Schleich enumerates 25 cases of piles which he could dismiss cured after six to ten days, after-treatment as usual.

Analogous to this operation are those inside the vagina (four cases of colporrhaphia) and, with the necessary variation, that of phimosis and paraphimosis (32, respectively 5 cases).

* Schleich (l.c.) performed twenty-eight laparotomies, ten ovariectomies, four ventrofixations of the uterus, seven herniotomies, three gastrotomies, two cholecystotomies, two exploratory laparotomies with his method.

† The method will prove particularly useful for operations on hydras and the gall bladder in two times, first cutting through the abdominal walls to the cyst-wall under local anaesthesia, and opening it after adhesions with the peritoneum are formed, the vomiting which endangers this safest way of operating, by rupturing the cyst-walls prematurely being abolished.

The Abscess.—In regard to abscesses, it is to be strictly observed that under no circumstances must any fluid be injected into them before at least some of the contents are previously allowed to escape, as the increase of inside pressure is extremely painful, and that the first injection must be made into healthy skin, at some distance from the abscess. After infiltrating the skin covering the abscess (with solution No. 1, if there is much inflammation) a very small incision ought to be made, part of the contents let out, and the pyogenic membrane infiltrated before extending the incision. By injecting the walls of the abscess, it can be scraped out painlessly with a sharp spoon. It does not matter in the least how deep the abscess is located, as, by slowly progressing from layer to layer, we are always able to reach it. I may state that I opened an abscess of the thigh containing about a pint and a-half of pus, originating from the periosteum, which I could only reach by working through the big adductor-muscles fully four inches deep, and ligaturing several arteries. The patient never flinched.

Panaritium.—This most frequent object of minor surgery requires a very subtle technique under the new method. In all highly-inflamed parts the infiltration must be carried out very carefully, starting in absolutely uninfamed tissue, and, at least partly, with solution 1. The infiltration ought to be established all around the inflamed parts, so as to separate them from the healthy ones by a perfect wall of oedema. Supposing the panaritium occupies the last two phalanges of a finger, we begin the infiltration on the radial side of the first, the uninfamed phalanx. After establishing here (if necessary, under ether spray) a preliminary superficial weal, we proceed slowly deeper, by lowering the point of the needle, and under continual pressure in an acute angle, right into the periosteum, gradually approaching the affected phalanx. The same is done on the ulnar side, and, if necessary, on the volar and dorsal surface of the finger. Ultimately, as the diseased parts become infiltrated, they grow livid, and can be cut and scraped *ad libitum*. Should any pain be felt, it can be speedily removed by continuing the infiltration. By compressing the first phalanx from both sides the operation can be carried out almost bloodless. It is important to note that infiltration into the thickened epidermis of the fingers or the palm of the hands of labourers is often difficult, painful, and requires a great pressure on the syringe. It may be necessary to chip away the hard superficial layers of the epidermis, and to proceed very slowly.

Boils.—Here, unless we content ourselves with

simply incising them, which can be done by a simple skin-infiltration with solution 1, it may be convenient to approach the inflamed tissue from four sides, and, by lowering the needle, to undermine, so to say, each boil by a perfect bed of infiltration, after which the whole boil can, if necessary, be cut out. (Fig. 2.)



FIG. 2.

UNDERMINING A TUMOUR BY A SERIES OF WHEALS.
T, TUMOUR; a, STARTING POINTS FOR THE INFILTRATION.

I content myself for the present with the foregoing examples, but I may be allowed to add that, besides the minor and major operations quoted, a great number of others have been performed under this method of local anaesthesia (dental, fresh wounds, opening of the mastoid bone, ligatures of the large arteries, ingrowing nails, etc.), altogether over 3,000. From the

limited experience which I have been, so far, able to gain about it, I do not hesitate to recommend it for further trial. I need not mention that even the author of this method does not claim to *replace* general narcosis by it. Not only are there cases where it is insufficient, or the nature and local conditions of the ailment do not admit of its administration, but sheer nervousness at the idea of an operation being performed, or at the sight of blood, restlessness in the case of infants, modesty (or prudery?) on the side of women, will often prove an obstacle to its use. If, therefore, the author believes that his method should allow to dispense with about 80 or 90 per cent. of general narcosis, this may be a rather sanguine estimate, but it would be a great gain, indeed, if most of the minor operations could be performed without exposing the patient to the dangers, or, at best, the inconveniences of a general narcosis.

Before I close, I will not omit to mention that Dr. Schleich, in his book, also gives a theory of his own about the physiology of general narcosis, and derives from it some apparently very valuable hints how to diminish its dangers. I reserve a report on this part of his work, subject to the kind permission of the editor of this paper, to a future occasion.

NOTES FROM A TASMANIAN CASE-BOOK.

BY WALTER SPENCER, M.D. BRUXELLES, FORMERLY GOVERNMENT MEDICAL OFFICER ON THE N.W. COAST OF TASMANIA.

1. CHONDROMA IN AN AWKWARD PLACE—

F. B., age 35, married and with a family, complained in September, 1887, of constant pain and sense of weight in the perineum, also of frequent chordee. Urine 1015 acid, slightly albuminous, urethra and bladder irritable, no venereal history, left ventricle hypertrophied, kidneys tender on pressure. Under treatment, the renal symptoms disappeared, but the pain and chordee persisted. Examination of the urethra revealed a slight stricture four inches, and a tight one six-and-a-half inches up. He was, therefore, provided with a suitable soft catheter, and instructed in its use. The chordee grew worse every night until coition became intolerable, and intractable but slight gleet set in. One year afterwards a small firm tumour was perceived on the dorsum penis, midway between the root and the glans; it increased with time, became hard and knobby, and I suggested its removal.

He sought other advice, but returned in March, 1890, unrelieved. I then found an additional moniliform chain of smaller tumours extending along the side of the right crus, diminishing in size from the root towards the middle of the organ, which by this time was habitually bowed down.

On April 22, 1890, eighteen months after its first appearance, I excised the dorsal tumour under cocain. Careful dissection separated it from the dorsal vessels and trabeculae of the corpora cavernosa, which seemed to merge into its substance. It proved to be a fibrous chondroma irregularly oval, measuring $11 \times 5 \times 3$ mm. The urethritis chordee and pains ceased, and the patient could resume coition to his own satisfaction.

I did not interfere with the lateral tumours, which must have caused him trouble since. I saw him occasionally up to the time I left the district, but he made no complaint.

He was first treated for renal, then for urethral symptoms, but at length the tumour appeared to be the prime factor in the case.

2. RUPTURE OF UTERUS—

On July 19, 1890, I was called to the accouchement of Mrs. W., a fine young primipara. Labor was preceded by some hours of obstinate vomiting, but commenced on July 20, and resulted after nine hours, in the delivery of a healthy female child. The last labor pains were unusually forcible. Expulsion of the placenta being delayed, I had to remove it. On exploring the fundus uteri, I was horrified to feel the breadth of my hand pass through a rent near the left cornu, and my fingers to be slipping amid coils of intestine. Severe hæmorrhage, with symptoms of collapse, ensued. I injected ether and caffein into the arm, ergotin into the buttock, and prescribed quinine, gr. v., with acid hydrobrom. dil., to be taken every two hours.

On the following day she had rallied, pulse 120, temperature 100° , respiration 28, and the uterus lay in the right iliac fossa. I drew off 40 oz. of urine, and reduced the quinine to every four hours. The child was put to the breast, but in a few hours the milk became so unpalatable that it had to be nourished artificially thenceforward.

I had kept the danger a close secret, and maintained a cheerful demeanour; but, as symptoms of cinchonism developed, the patient's mother, who had been objectionably officious, became more and more abusive, accused me of poisoning her daughter, and compelled me to constrain the husband to eject her from the house.

On July 22, the uterus was up to the umbilicus. I drew off urine 20 oz., and cleared

the bowel by enema. A clot the size of the uterine cavity passed per vaginam; P. 126, T. 98.4° . At this stage I believe that danger from the rupture ceased, two days after its occurrence. On July 24 the quinine was reduced for the time to twice a day. The house was damp and leaky, situated on swampy ground, and the weather bad. To this cause I attribute rise of temperature, with rigors, which occurred that night.

July 25.—An enema was given; P. 116, T. 100° .

July 26.—The patient was over-excited by her mother, who had again interfered; P. 132-150, T. 102° - 103° . Quinine was now prescribed in cachets, gr. v. every three hours. Pyrexia continued intermittent until August 5. Frequent catheterism and enemata were needed, and quinine repeated at more or less frequent intervals. On the sixteenth day after delivery she was convalescent.

Instances of ruptured uterus must be more frequent than is supposed. The happy issue in this case was due to contraction of the uterine muscle and antiseptics effected by quinine.

3. ASCITES AND EMBOLIC PYÆMIA.—

Of this, owing to the patient's husband having charge of the case, my notes are meagre. Some characteristics of *pylephlebitis* were absent, yet to that category it belonged.

On September 21, 1890, I was called to Mrs. X., a lady past middle age, mother of a grown-up family, and wife of a respected medical practitioner (since deceased), resident in an adjoining district. She had had dysentery in India many years ago, and during the past few months had remarked a gradual increase in her girth. She complained of pains in the abdomen, with anuria and constipation. She had taken to her bed. Ascites was recognised. P. 88, T. 101° . During the next two days she regained ease and rest, but the temperature rose to 103° , and the ascites had increased. Hepatic abscess was suspected.

On September 28 I met Dr. Payne, from Latrobe, in consultation. The secretions had responded to treatment, but the ascites had not diminished. We discussed various hypotheses without finding satisfaction. On September 30 we again consulted. The ascites had remained stationary, but the heart was enfeebled and the patient sinking into a typhoid state. On October 2, the ascites was again augmented. The left thigh was swollen, with brawny œdema, and the patient in occasional low delirium.

On October 3 the left thigh, leg and foot were swollen, hard and cold. The ascites threatening

to cause syncope, I performed paracentesis, and drew off six pints of straw-coloured fluid from the abdominal cavity.

October 5.—Incontinence of urine; bed-sores imminent.

October 6.—T. 103°-104°.

On October 7, I was hastily summoned in the morning, and remained until the following day. Ascites was reaccumulating; subsultus, cold sweat, and muttering delirium had set in. R. 48. Radial pulse extinct. Left thigh presenting bullæ, and foot gangrenous. Pupils dilated; risus sardonius. She died that evening, after an illness of seventeen days.

I was extremely desirous of a necropsy, but had to suggest it with great delicacy, in respect for the husband's grief. He would only consent to my opening the abdomen sufficiently to admit the hand, and was present at the act. Being denied the aid of vision, my definition of certain viscera was imperfect, but I found the small intestines and omentum on the right side matted in places to each other. The liver was diminished in size, of normal consistency, its surfaces smooth and free from pits or softening which could suggest abscess. The gall-bladder seemed normal, the kidneys too small. What I made out to be the pancreas was in a pulpy condition. Along the lower border of the transverse colon or in the meso-colon, ran a horizontal chain of nine concretions which I enucleated, one by one, with the finger-nails. On removing the last one the adjacent gut burst over my hand. Having an abrasion only coated with collodion, I feared to proceed further, although exploration of the left hypochondrium and pelvis seemed so desirable.

The concretions averaged 12mm. in length, were irregularly cuboid, faceted at the ends, corresponding one with another, in colour yellowish white, mottled with darker patches. They seemed hard, but proved friable under strong pressure of finger and thumb; their interior had the aspect of dried pale fæces. One yielded, on analysis, inorganic salts with some hæmatin, without trace of cholesterin. I assumed them to be phleboliths, parts of an altered thrombus.

4. HEPATIC ABSCESS OPENING INTO LUNG.—

On January 13, 1887, came from a neighbouring district Mrs. J., aged forty seven, a widow having a grown-up family, who stated that she had been treated for phthisis for some years. She appeared much emaciated, enfeebled, and articulated with difficulty, complaining of thoracic pains, cold sweats, sore throat, and of a racking cough, which lasted for five hours every night accompanied by severe retching and

vomit of quantities of highly-offensive black and green pus. P. 124, T. 100·5°, R. 14.

Nothing definite could be made out on physical examination, except one dull area measuring about 4 x 3 cm., at the right base in the mammary line.

I recommended her to a lodging in the town, and prescribed antiseptic inhalations, the use of a respirator charged with terebene, and general tonic.

On January 18, in addition to her usual symptoms, she had slight hæmoptysis, and cavernous râles were audible on auscultation over the dull area. P. 120, T. 102°, R. 20.

I temporised with her case until January 24, when, finding that she had coughed all night, ejecting 8 ozs. of fœtid pus, and was exhausted by long straining, I decided to explore for abscess.

Dr. McCall, of Ulverstone, undertook the risk of administering chloroform, which we elected in preference to ether. Twice I vainly inserted the aspirating needle between axillary and mammary lines in the seventh intercostal space. On the second insertion I obtained only a few drops of clear serum, although I ventured to push the needle-point in various directions.

Having formed a strong opinion as to seat of mischief, and being most desirous of solving the question at once, I next inserted the needle at a spot one inch to the right of the gall bladder, below the ribs, pushing obliquely upwards, backwards, and towards the left, piercing through liver and diaphragm from below. I was rewarded with 1½ ozs of turbid pus, followed by a less quantity of pulverulent, shreddy, dark-brown substance, mixed with a little frothy blood.

She rallied well after the narcosis, in a light, warm sweat, without cough (P. 104, T. 98·6°, R. 28), and complained only of headache, and of her side feeling stiff. She remained under my care until February 11, another eighteen days, during which improvement was irregular. Pyrexia oscillated, and on first moving about she ejected pus less offensive than before. She finally departed for home with no complaint but a slight cough, which afterwards left her. She gained flesh and strength, and reports received during the following two years represented that she was actively engaged upon her farm.

5. EPIDEMIC JAUNDICE—

Discussions of late in the columns of the *British Medical Journal* seem to have established the occurrence of this complaint. In the first summer of my residence in Tasmania, I had, during three weeks, nearly twenty cases in

young children. They all resided on one side of a certain road where the houses were erected on a swamp, whilst those on the other side, which was better drained, escaped. Reasoning upon this circumstance, I dosed them with quinine. Recovery was *cito tute et jucunde*. I am, therefore, inclined to regard similar outbreaks of catarrhal jaundice as of endemic, rather than of epidemic origin.

CONGENITAL HYDROCEPHALUS COMPLICATING DELIVERY.

By JOHN WARD, M.D., ST. AND., M.R.C.S.,
ENG., OF OPHIR, NEW ZEALAND.

ON March 23rd, 1895, I was summoned a distance of 25 miles to see Mrs. H., who resided near St. Bathans, and who was supposed to be in labour, though not at her full term of uterogestation. The patient was of the age of 19 years, and had been married about seven months. She was short in stature, rather broad in build, and had, I believe, generally enjoyed good health. Her father, a gold-miner, was a short, robust, thick-set Cornishman, well-known to myself. Her mother, it might appear, had been somewhat delicate, and, after giving birth to eleven children, died some ten years ago, shortly after her last confinement—it was said from blood poisoning, though there appears to have been harass of mind, owing to the financial difficulties of her husband at the time. Mr. H., the husband of the patient, was an Irishman, of about forty years of age, sandy complexion, stout build, with large head, also a gold-miner. He said he had a very large head when a child, which probably betokened tubercular tendency.

The patient was reported to have been very unwell for some weeks, suffering from pain and great abdominal distention, so much so that, her build being stout, her breasts were displaced upwards from the large size of the womb, the pain being referred to the abdomen and lower extremities; the central nervous disturbance being evidenced by disturbed rest, and frightful dreams more especially.

Some two or three days before my visit the old midwife of the district, who had advised them to send for me, reported that "the waters had broke some two days before, and had nearly drowned them out," since which the womb had sunk somewhat, though her pains were peculiar, and still very distressing.

I found the os uteri thick, fleshy, and about the size of a shilling in diameter. There were no characteristic labour pains, so, after trying the effect of a dose of quinine, and waiting a few

hours, without noticing any change, I administered morphia sub-cutaneously. I left regretting that I lived so far away, but adding that I would hold myself in readiness to come at their call. The following day was Sunday, and I felt some anxiety on account of the telegraph office being closed. However, through the courtesy of the postmaster at St. Bathans, and the kind co-operation of the official at Ophir, where I reside, who keeps a wire hitched on to his dwelling-house for the special convenience of the district in urgent cases, I was enabled promptly to answer their summons on the evening of that day. After a three hours' journey, or rather more, I was again in attendance, and found Mrs. H. in an agony of pain, expressed chiefly as cramps in the legs and thighs. There had been frequent fits of vomiting, and she could retain nothing on the stomach. The os uteri was somewhat thinner, and more dilatable, and I felt a somewhat perplexing hard substance, which did not give the usual compact feel of the foetal head, and there was a slight oozing or "show," but not of the ordinary nature. After administering chloroform, which served the purpose of causing the os to dilate more readily, as also of relieving the agonising pains, which the attendants said they thought "were almost making her mad," I succeeded after a while in introducing the forceps, but found they soon collapsed and came away. On digital examination again, I detected a hole in the skull, of small size, and before this had noticed that sanguineous fluid and brain matter had been discharging from the os; so there was no doubt now about the child being dead, although I had detected the pulsation of the foetal heart on the day of my former visit. As my craniotomy forceps and other suitable instruments for the occasion were at my residence, many miles away—the night, moreover, being very dark—the difficulties of the situation will be readily perceived, especially as any traction on the attenuated and macerated tissues and bones of the skull within reach of the fingers caused them to give way and tear. Applying a binder tightly on the abdomen of the patient, and directing an assistant to aid by external pressure on the fundus downwards, after giving a dose of ergot, I at length succeeded in slipping a tape round the neck of the child, by the aid of which delivery was shortly afterwards accomplished.

On examination of the foetus, I found it to be that of a male of about seven months. The skin of the scalp was enormously distended and attenuated, the parietal and adjacent cranial bones very thin, and presenting the appearance of long

maceration in fluid. The eyes protruded from their sockets, and the nasal bridge was very broad and full, corresponding to the tension to which it had been subjected. The penis was swollen, and almost of the hardness of soft cartilage. The umbilical cord was studded with loops of a somewhat similar structure in appearance, and the placenta was of unusually large size.

It was evident that the enormously-distended head had given way on the escape of the large quantity of fluid which was reported to have come away some two days before I was asked to attend, resulting as it did in considerable relief for the mother from the distressing symptoms of abdominal distension and over-loaded bladder, which latter symptom had been evidenced by the dribbling of the urine for some time. Living at so great a distance from my patient—especially when the element of expense entailed is keenly felt, as in the case of an ordinary labouring man or gold-miner—I felt some additional anxiety as to the subsequent progress of the case towards recovery; but a couple of telegrams, received on the second and third day after delivery, were of a very favourable nature, and I have heard nothing more of her, and so have reason to conclude she made a good recovery.

It is not often that such a complication to the completion of delivery occurs. The frequency of hydrocephalus in the fœtus is estimated by Lachapelle as 1 in about 2,900 deliveries, as noted by Galabin; and the latter author states that in the Guy's Hospital Charity, perforation or puncture on account of hydrocephalus was called for only once in 23,591 deliveries. Under such circumstances, it is perhaps somewhat remarkable that two such cases should have occurred in my own experience. Several years ago, when resident in North Derbyshire, England, I was called in consultation, by Dr. Grindrod, to a case of hydrocephalus complicating delivery, on which occasion tapping was resorted to, and by the aid of the usual instruments—a matter of less difficulty when such aids are available—relief was soon obtained.

NOTES FROM A COUNTRY PRACTITIONER.

BY GERALD S. SAMUELSON, M.D. EDIN.,
KANGAROO VALLEY, N.S.W.

THE first case is as yet incomplete, but in its present stage is interesting.

1. J. L., aged 11 years, a boy of healthy habits, appearance and ancestry, broke his leg five years ago. It was put up by a neighbouring surgeon, but afterwards became deformed. He was then treated by operation at the Prince

Alfred Hospital, Sydney. I saw him in October, 1893. The right leg was bent to such an angle anteriorly that a plumb-line dropped from the apex of the angle impinged upon the toe. The union was osseous, but the leg was too much shortened to be of service. At his parents' request, I operated a few days after, and resected a wedge-shaped portion of bone, bringing the shaft readily into a straight line. The external wound healed without trouble. The union is yet unreliable, but improving. The interest in this case is the comparison between the two legs, and the consequent treatment of the right leg by rest or exercise. After operation there was a doubted shortening of $\frac{1}{2}$ in., now there is $1\frac{1}{2}$ in., and the right foot is one-third smaller than the left. Mal-union is usually due to a lack of physique, rest, or apposition of fragments; none of these desiderata have been absent. Children seldom suffer in this way, and with them union is usually rapid—probably, among other reasons, because of their structural activity. Three months ago I thought I might be enforcing too much rest upon the part, and producing a lassitude therein. I, therefore, enforced activity, with the result that the leg is markedly improving. Considering the two previous rectifications, I at first strove for mere straightness, relying upon mechanical support for ultimate strength. Now I believe that, granted further supervision, my patient will stand on his own feet. We are not out of the wood yet.

My second case reflects no credit upon the profession in any way.

2. C. B., a stout youngster of two years, was brought to me on March 24, 1894. The patient showed typical evidence of empyæma; the apex beat was felt to the right of the sternum. At the same time I was consulted by the patient's maternal aunt, who has pulmonary tuberculosis. The parents refused private or hospital operative treatment in any form, and sent the boy to his grandmother, when he was seen by my friend Dr. McKillop, of Goulburn. Appropriate treatment was again refused, and in April I learnt from the father that the grandmother was using poultices. Later I heard that the "abscess had burst," and, in May, that it had healed. The child has had no symptoms since, and in August and January was, apparently, in rude health. My bacteriological studies have not yet taught me to regard linseed poultices as an anti-septic dressing. I cannot recommend them as such.

To those of my confrères acting under the "Diseased Meat and Animals," the "Dairies Supervision" and allied Acts, the following may be of interest:—

3. A constable condemned a cow, which, in his presence, was slaughtered and the abdomen opened, whereupon an ovoid lump tumbled out. It was of gelatinous consistency, and about half again as large as my fist. It was not dissected out, and had not the appearance of having been recently adherent. It was a fetus. There were no limbs, but the ribs were ossified, and the cranial, pelvic and vertebral bones partly cartilaginous. The skin, brain, tongue, liver, and lungs were readily distinguishable, and were severally histologically examined. I could not find in the carcase any uterine or ovarian abnormality, but there was on the peritoneal surface of the anterior abdominal wall the appearance of a ruptured cyst. It had apparently been a tubo-ovarian ectopic gestation; the sac at one or other time became adherent to the abdominal wall, finally rupturing. The cow was expected to calve in a few weeks. The outward appearance of the lump was that of an enlarged gland from a case of "lumpy jaw." These glands are not often opened by inspecting troopers, for they are usually mere bags of offensive pus. A lump, however, of the above class, put in evidence in a disputed case of tuberculosis, would give an expert for the defence a rare chance. I believe these cases are exceedingly rare.

TWO CASES OF PERIPHERAL NEURITIS DUE TO ARSENIC.

By CECIL PURSER, B.A., M.B., CH.M., LATE
MEDICAL SUPERINTENDENT PRINCE ALFRED HOSPITAL, SYDNEY.

THE following two cases I thought worth while recording, since such are comparatively rare; and these, together with two others previously reported by me in the *Gazette*, were the only cases of the kind admitted to the hospital during my term of four years' residence.

I am indebted to Dr. J. C. Cox (under whose care the patients were while in hospital) for kind permission to publish them.

On August 1, 1893, R. W. J., a single man, *æt.* 62 years, was admitted to the hospital, having been transferred from the Bowral District Hospital, where he had been under treatment for about three weeks. The history given was that he and his mate had been camping out in a tent for the purpose of catching opossums and wallaby, to obtain their skins. To cure these skins they used some preparation containing arsenic; the proportion or quantity was not known. It was in the form of a powder, and they mixed it up with water in a tin dish. On

one occasion they rinsed the vessel out, and in it kneaded dough for making dampers. Two or three days after partaking of the damper pain was experienced in the abdomen and across the shoulders. A morning or so later, when getting out of bed, he felt dizzy, and weak in the legs. Vomiting and diarrhoea next set in, the face and eyes became flushed, and a day or so later on he could not stand. He was removed to the Bowral Hospital, and placed under treatment, but was gradually becoming weaker.

There was no history of potus; the only illness that he had even suffered from was rheumatism, some five years previously.

On admission patient was absolutely helpless. He could not turn in bed, and was unable to feed himself. Temperature normal. Heart sounds weak. Respiratory system normal.

Both arms were very much wasted, the interossei muscles markedly, the three ulnar digits could be flexed to some extent, but could not be fully extended. The index finger and thumb could scarcely be moved; wrist-drop present; no power of extension of arm, flexion very slight. The extensor muscles of forearm were very much wasted; power of extension of elbow very feeble, that of flexion rather better. The deltoid was wasted, and the arm could not be abducted. There was more power in the adductors than in any of the other muscles. The nerve trunks could be felt thickened. Sensation in fingers was impaired.

As to the lower extremities, there was well-marked foot-drop. Muscles of calf and front of leg were very much wasted; the thigh muscles were also affected, but to a lesser degree.

There was considerable muscular tenderness at first, but it was only slightly marked on admission. There was muscular twitching in the extremities, and a slight sensation of tingling and some pain in the toes. Plantar reflexes absent. The abdominal reflexes could not be elicited.

Electrical Reactions.—The ulnar nerves reacted to galvanism. The muscles of arm and forearm reacted more readily than normal to galvanism, but K.C.C. was everywhere greater than A.C.C. The muscles reacted fairly sharply. There was no reaction to faradism.

The treatment adopted was: Medicinally, iodide of potash and strychnine; and electricity in mild dosage was employed.

The temperature varied between 98° and 99° F. until a short time prior to his death, when it suddenly rose to 102° F.

Although there seemed to be a slight return of power in the extremities a week or two after admission, there was practically no improve-

ment, he gradually becoming weaker, and finally died on October 1, 1893.

A *post-mortem* examination was held thirty-six hours after death, but, unfortunately, decomposition had so far advanced that the spinal cord was useless for minute examination. There was no signs of peritonitis, and mucous membrane of stomach appeared healthy. No sign of ulceration or disease in intestines. Liver fatty, kidneys congested. Heart very flabby; no valvular trouble; endocardium deeply stained. No other changes to be noted.

G. T., *et. 22* years, a single man, the mate of the patient whose case is above recorded, was admitted to the Prince Alfred Hospital on September 11, 1893, he having been an inmate of the Bowral Hospital some weeks previously. He stated that he had been ill for nearly three months, and complained of loss of power in the upper and lower extremities; also pains in the legs, which occur occasionally, and are situated in the calf muscles, being shooting in character, and are worse when he stands up. He attributed his illness to the eating of damper which had been mixed up in the tin dish, as recorded in the previous case. He stated that half-an-hour after partaking of the damper he became very sick, and experienced a most intense burning pain across the epigastric region, which doubled him up. He commenced to vomit violently, and this persisted for three weeks. The matter ejected was greenish-looking occasionally, at other times dark, like coffee grounds. He had diarrhoea for three weeks, and states that he passed some blood.

About three weeks after partaking of the bread, he noticed a peculiar feeling in his hands and feet, like pins and needles; worse in his feet. There was also a feeling of numbness and tingling in the fingers and toes. He felt himself becoming very weak, and used to become exhausted on the slightest exertion. When he walked he soon became very tired, and felt especially so in the muscles of the front of the leg. He became unable to walk about three weeks after the onset, and has remained thus ever since. During this time he has been able to move his legs and arms slightly. He had to be fed since he could not raise his hands. He stated that the muscles had wasted considerably, especially those of the forearm and leg. For the last week or so he has suffered from a frontal headache, which comes on towards evening.

Previously he had led an exposed life, but never had any severe illness, only troubled with slight coughs occasionally.

His state on admission was as follows:—Very

much emaciated, having lost one and a-half stone in weight. Face flushed, eyes look glistening; temperature normal; facial expression anxious.

Respiratory System.—Normal.

Digestive System.—Tongue coated; appetite bad; no pain after taking food; bowels regular.

Urinary System.—Urine, *sp. gr.* 1032, acid; no albumen; urates.

Integumentary System.—No rash or eruption; local sweating of palms of hands and soles of feet, and it is of an offensive odour.

Nervous System.—Sensory functions; tactile very fair. He said that previous to this illness it was somewhat impaired. Slight feeling of pins and needles in his feet; sensation in hands good, somewhat blunted in the soles of the feet; sensation to heat and cold good; no girdle sensation; muscular sense good.

Eyes.—Pupils slightly dilated; re-act to light and accommodation. Sight good, but he says the eyes become tired very quickly when he reads. Slight conjunctival congestion; no diplopia.

Motor Functions.—Plantar reflexes absent, cremasteric present slightly, abdominal present, epigastric present, ankle clonus not present, knee-jerks absent.

No trouble with organic reflexes.

Sexual functions apparently normal.

The muscles were greatly wasted, and soft and flaccid in the forearm. Thenar and hypothenar eminences quite flattened. Interossei very much wasted, leaving distinct depressions between the metacarpal bones. The fingers could be flexed slowly, but not firmly. No power in the grip. The index and little finger could not be completely extended. Wrist-drop present. Pronation and supination good. Flexion and extension at elbow somewhat impaired. The muscles of legs were wasted, especially those on the anterior aspect. Foot-drop present, which is improving. Power of flexion and extension at knee impaired. Thigh muscles soft and flabby. He had great difficulty in standing without support; when the eyes were closed staggering became apparent. Great difficulty experienced in walking, becoming tired very quickly. The feet could not be raised high, and the heels were brought down with some force. Only very short steps could be taken. The toes could not be lifted very well, and occasionally they used to trip him. He had the sensation of walking on velvet.

The memory was good, and he slept well.

Muscular power very poor.

Reaction of degeneration was well marked.

Treatment.—Galvanism was employed regularly, and later on faradism and massage.

Medicinally he was treated with potassium iodide and strychnine.

Improvement was slow, but sure, and he left the institution on November 20th, 1893, very much better, being able to walk fairly well without any assistance.

"Valdemar," Boulevard, Lewisham,
May 1, 1895.

CASES UNDER ANTI-TOXIN.

DR. SPRINGTHORPE, of Melbourne, reports the following fresh cases:—

11. H—— K——, girl aged seven, one day's illness, sudden onset. Admitted March 3rd, complaining of sore throat and headache. Temp. 102.2. Patch of membrane on left tonsil. Nine days previously sister had died of diphtheria. No implication of nose or larynx. M. de Bavay found diphtheric bacilli present. 10cc of Behring's anti-toxin injected on admission. Locally sprayed with lactic acid and lime-water. Membrane disappeared by the following morning, though Temp. slightly raised for two days more. Convalesced without further trouble.

12. E—— L——, boy aged eight, six days' illness, gradual onset. Admitted March 7th, complaining of sore throat, insomnia and feverishness. Temp. 99.8. On left tonsil large sloughing membranous patch, with good deal of surrounding injection and swelling. 10cc. Behring's anti-toxin at once. The membrane cleared off but slowly, leaving the sloughing condition much as before. M. de Bavay found diphtheritic bacilli and streptococci both present. No further trouble locally. Lactic and lime-water.

13. W—— C——, baby aged four months, two days' illness, generally upset and declining the breast. Sister in the hospital with laryngeal and nasal diphtheria. The baby had been treated for the two days with hydrarg. perchlor. and iron, and perchlor. spray. 7½cc. Behring's anti-toxin then injected. Condition improved. Admitted to hospital March 25th, 1895. There was then plenty of membrane on both soft palate and tonsils. No laryngeal signs, but some nasal discharge. Temp. subnormal. As the membrane persisted, a second injection of 5cc. was given on the 28th. Membrane now cleared off. General condition excellent.

Dr. Cherry reports that he was unable to find any diphtheritic bacilli in the sample examined by him.

14. C—— C——, boy aged seven. Probably two days' illness. Admitted 27th March, complaining of sore throat only. That morning signs of laryngeal implication, and membrane present on both tonsils, especially the left. Temp. subnormal. The lips were cyanosed, breathing stridorous, and chest walls retracted. 10cc. of Klein's anti-toxin at once injected, and a few minutes later tracheotomy performed by Dr. Ramsay. Almost immediate relief. No membrane below the opening. Has been practically well ever since, and membrane practically disappeared within thirty-six hours. Tube still in. No culture made, owing to temporary lack of tubes and rapid disappearance of membrane. No general or local treatment.

TWO CASES OF DIPHTHERIA TREATED WITH BEHRING'S ANTITOXIN.

By W. CAMAC WILKINSON, M.D. LOND., M.R.C.P.,
LECT. ON PATHOLOGY, SYDNEY UNIVERSITY, AND
ASST. PHYSICIAN TO EAR, NOSE AND THROAT
DEPARTMENT, SYDNEY HOSPITAL.

It is my duty to report two cases of diphtheria treated with Behring's antitoxin—one of them illustrating failure, the other success.

CASE 1 (boy *æt.* four years).—Illness began Saturday, April 20, but disease was not recognised till Wednesday, April 24. I was sent for on Thursday, April 25. On examination, I found both tonsils, back of pharynx, and edge of soft palate covered with a thick tenacious dirty-grey or greyish-black membrane. There was considering swelling of glands of neck. Pulse, 136; temperature, 101.8°. Besides there was well-marked croupy bark. Breathing was 33 per minute, and there was just slight recession at bases of lungs.

At 3 p.m. I injected the full flask No. 1, containing 600 immunity units. The injection itself caused little pain beyond the prick, and was absorbed without causing any disturbance, local or general. I feared that the obstruction in the trachea would increase, and warned the medical man of this risk. The case was watched through the night by a nurse. A few hours after the injection the little patient was bright, and took his food very well.

At 6 a.m.—or before—the difficulty of breathing increased, and the condition of the child changed. This the nurse reported, and yet I was not informed of the condition till 9.15 a.m. I arrived within half-an-hour, and found the child in the last struggles of suffocation. He was perfectly livid—his eyes starting out of his head—and there was extreme recession of the chest. The nurse had not recognised the nature of his symptoms, and thought he was sinking. As soon as I could get the instruments, without waiting to give any anæsthetic, I opened the trachea, but too late. The child gave a few gasps after I had practised artificial respiration for a few minutes. I believe that the child's life might have been saved if tracheotomy had been performed half-an-hour sooner.

It was highly unsatisfactory that the child should have been allowed to pass into a state of extreme suffocation without the nature of the danger being recognised. Death was due to mechanical suffocation, and if this condition had been temporarily relieved the anti-toxin would have had a chance of rendering the poison of the diphtheria bacillus inert.

No further comment is necessary. The unsatisfactory issue cannot be laid at the door of the anti-toxin treatment.

Bacteriology.—I have obtained pure cultures of virulent diphtheria bacilli, streptococci, staphylococcus aureus and micrococcus cereus albus from the throat.

CASE 2 (girl, sister of above, *æt.* five and a-half years).—On the Monday following death of brother, I saw this little girl, and examined her throat. There was no sign of diphtheria. On the following Wednesday I was again called to see her; found an extensive, tenacious dirty-grey membrane covering the whole of the left tonsil, and spreading continuously across the pharyngeal wall to the posterior part of the right tonsil, where it was not visible until the child forced out its tonsils. A superficial view of the throat gave no idea of the extent of the membrane; but when the tongue was well depressed, and the child was made to force out its tonsils, it was seen that the membrane was continuous by the pharyngeal wall

from one tonsil to the other. On the right tonsil in front, and on the soft palate, there were only scattered spots of various size, one on the right tonsil being about one-sixth of an inch in diameter. The uvula was deep-red and oedematous. At the edge of the membrane the mucous membrane was swollen, and of a deep, dusky-red colour. Pulse, 186; respiration, 23; temp., 102°.

3 p.m.—I at once injected contents of flask No. 1 (600 immunity units), and the effect was truly magical. The child scarcely cried when the needle was introduced, and the injection was absorbed without any local or general disturbance.

11 p.m.—Temp. 108°, pulse 130, respiration 19. I saw the child next day at 3 p.m. (twenty-four hours after injection). Most of the membrane had seemingly dissolved. There was left only a thin whitish layer through which in places the mucous membrane appeared.

Next day, at 4 p.m. (forty-eight hours after injection), there was no membrane to be seen. Temp. 100°, pulse 107, respiration 18. This case has convinced me of the extraordinary power of Behring's anti-toxin in the first days of an attack of diphtheria. There was no local treatment at all; no applications to throat.

A day or two after the injection the child did not appear ill, and from that moment she has had no symptoms. The sore throat left her, and she took her food readily and in abundance.

This case was an object lesson. The first unfortunate case shows only that, if the membrane has formed in the larynx, the necessity for tracheotomy or intubation may be greater after anti-toxin treatment than in its absence. Tracheotomy may be well replaced by intubation, but intubation is not quite so easy of performance as some of its advocates seem to imply. At least, intubation needs some practice. This I have learnt from experience in another case. In future cases I should certainly adopt intubation in preference to tracheotomy.

I also gave a little boy of two years, in the same family, an injection of 2cc. of anti-toxin for protection. He showed no symptoms at the time, and has escaped the disease so far.

Let me say, in conclusion, that Behring's preparation is the only one regularly tested and brought to a definite strength. I am now engaged in testing the relative strengths of Behring's, Ruffer's (British Institute), and Roux's anti-toxin. I have obtained through Professor Loeffler, and from him, some virulent cultures of the diphtheria bacilli; and by means of these, provided they have retained their virulence, I hope to arrive at a correct conclusion. I do not deny that all my prejudices are in favour of the anti-toxin prepared by the greatest living expert in this work—Behring himself.

I have a good supply of Behring's preparation in its various strengths, and shall be glad to see this preparation used.

DR. A. H. FIELDSTAD, of Bandwick (N.S.W.), reports the following case:—J. P., a boy *æt.* 9, had two injections of Ruffer's anti-toxin (20cc. and 10cc.) on March 15th (the fifth day of disease). He recovered, though his case was very serious. Urticaria and articular pains appeared on the tenth day after injection, but disappeared within twenty-four hours. Albumen in moderate quantity was present in urine, and a slight trace of it was still detected on the sixteenth day after injection.

NOTES OF A CASE OF DIPHTHERIA TREATED WITH ANTI-TOXIN.

By P. T. THANE, L.R.C.P. LOND., &C., YASS, N.S.W.

THE diagnosis of this case was confirmed by the Board of Health in Sydney, by finding the characteristic bacilli in gelatine inoculated from the patient's throat.

F. W. was quite well up to the morning of March 20, 1895, when she first felt pain in her neck. This was shortly followed by rigors, and towards night she got feverish. The throat got very sore, and very painful to swallow. First seen March 21, at 2 p.m. T. 101.4°, P. 108. She is a strong, big, robust woman weight twelve stone, complaining of sore throat, pain in head and back, soreness of limbs, and general weakness. The throat is very red, and tonsils swollen. The right one is covered, except in its upper part, with a thick white membrane the size of a shilling. The colour of the membrane varies in different parts, and its lower edge cannot be seen. The glands at the angle of the right jaw are swollen, very tender and painful, and there is marked swelling of the tissues about them. The tongue is thickly coated with yellow fur, and the breath is foul. Patient is weak and prostrated, and the headache is so severe that she has to keep the recumbent position. Urine faintly acid, 1026, faint trace of albumen, and phosphates abundant. The throat was painted with a mixture of iodine, carbolic acid, and glycerine; a mixture of chlorate of potash with iron and dilute muriatic acid given internally, and inhalations of eucalyptus every three hours. 11 p.m., T. 100°, P. 90 (small), R. 32; face flushed; breathing distressed, but no laryngeal stridor; very restless in bed. Swallowing more difficult, egg and brandy nearly choking her; throat about the same.

22nd.—T. 99.8°, P. 88, R. 24; restless night; face less flushed; complains of more difficulty in swallowing; throat better, less red; membrane divided into three thin white pieces; tongue still thickly coated; less swelling externally. When attempting to swallow some of the liquid runs out of nostrils. Not able to swallow medicine. Escharotic to throat repeated. Admitted to hospital. 3 p.m., T. 103.8°, 8 p.m., T. 103.6°, P. 120, R. 82; face flushed, and very restless. Has taken but little nourishment through the day, and swallowing still very difficult. No laryngeal symptoms; steam spray with eucalyptus every three hours; hot poultices to neck; unable to swallow medicine; brandy, $\frac{3}{4}$ ij daily.

23rd.—T. 102°, P. 124, R. 20, B. 1. Fair sleep up to 5 a.m. Swallowing a little better, and taking more milk. More swelling and oedema of throat inside; uvula markedly swollen; left tonsil swollen, red, and covered with large dirty-white patch of membrane; large piece of similar membrane on right; less swelling at right angle of jaw, very marked swelling at left. Stridor with breathing, and with considerable distress; speech very nasal; headache less; $\frac{3}{4}$ vj. anti-toxin injected into left back, close to angle of scapula. 12 noon, T. 103.4°, 5 p.m., T. 103.3°, 7.30 p.m., P. 104, R. 26. Sitting up in bed, breathing with laryngeal stridor; looks easier and brighter, but complains she cannot lay down on account of difficulty in breathing. Can swallow better, and has taken fair quantity of nourishment during the day. Throat more inflamed and swollen, especially soft palate; tonsils much the same. There is a large thin white film on left side of soft palate; urine, trace of albumen; copious lithates. 10.15 p.m., T. 101.2°.

24th.—7 a.m., T. 99.6°; 10 a.m., T. 99.8°, P. 88, R. 20, B. 1. Good night; fair sleep, less thirst; took less

nourishment; can lie down in bed; breathing easier and less noisy; site of injection painful when lying on it; throat still very inflamed and swollen; right tonsil quite clean, and no membrane attached; covering left tonsil, and extending up over soft palate and back into pharynx, there is a large piece of membrane, dirty-white colour, and firmly attached. The swelling below left ear and about left angle of jaw increased, and very tender; less swelling on right side; tongue beginning to clean. $\frac{3}{4}$ ij anti-toxin injected over sternum. 12 noon, T. $100^{\circ}4'$; 5 p.m., T. 101° ; 7.30 p.m., P. 88, R. 26. Lying in bed on back; breathing still stertorous, but quieter than formerly; expresses herself as feeling much better; swallowing better, and taking nourishment well. Throat much the same, save one small fresh patch of membrane on left roof of mouth, over hard palate. Urine clearer, lithates less, larger trace of albumen. 11 p.m., T. 101° .

25th.—T. 98° , P. 72, R. 18. General condition im-

proved; fair night; membrane in throat curling at edges and separating; thin film of membrane on right side of uvula; breathing not noisy. From this date she kept gradually improving, temperature keeping about normal, pulse not rising above 72. On the 26th a large piece of membrane came away from the left side, but it was not until April 3rd that the throat was quite free from membrane. Was allowed up on April 3rd, but on the 7th, as the albuminuria had rather increased, she was put to bed again. For two days complained of severe gastric pain, with vomiting. Pulse was 60, and small. With a bismuth and strychnine mixture, this passed away in a day or two, and in a few days was quite convalescent again. Discharged from hospital, free from albuminuria, on April 20th. There was no paralysis then, but I have since learnt that at the end of April she was readmitted to hospital with a recurrence of the albuminuria and some paralysis.

CASE OF DIPHTHERIA TREATED WITH ANTI-TOXIN.

BY T. EASTON ABBOTT, L.S.A. LOND., OF HOBART, TAS.

AN account of the first case of diphtheria treated with anti-toxin in Tasmania may be of interest.

Mrs. E., *æt.* 50, was seen on March 16, at Bothwell. Her daughter had died on the 10th inst. from diphtheria, and also a child. Another daughter was recovering, and had well-marked paralysis of palate. Mrs. E. had been ill since the 12th inst. (five days). She had nursed her daughter who died. Her temperature was 101° , pulse 108. The throat was red and swollen; the tonsils, soft palate, back of pharynx and sides of uvula were thickly coated with diphtheric membrane. The patient was greatly prostrated, and seemed very ill. The urine was albuminous.

Using careful aseptic precautions, I injected into ant. surface right thigh 400 anti-toxin normal units of Professor Behring's diphtheria remedy No.

Mrs. E., aged 50 years; seen 16th March, 1895. Had been nursing daughter, who died from diphtheria.

Date.	Estimated Day of Disease.	Time.	Temp.	Pulse.	Urine.	Remarks.
1895						
Mar. 16	5th	4.45 p.m.	101°	108	Albumen	Throat red and swollen; tonsils, soft palate, back of pharynx, and side of uvula thickly coated with membrane. Great prostration. Patient was taking Tr. ferri perch. and pot. chlor., and using a gargle containing sulphurous acid; 400 antitoxins normal units of Professor Behring's diphtheria remedy injected into front of right thigh.
		7.45	$100^{\circ}4'$	98		
Mar. 17	6th	10 a.m.	$98^{\circ}4'$	80	—	Membranes had nearly all separated and come away; only small patch on back of pharynx. Injected into left thigh 200 normal units of the serum, making 600 in all (10 cc.)
		4 p.m.	do.	do.		
Mar. 18	7th	11 a.m.	98°	—	—	A little patch of membrane each side of uvula removed easily with a brush. Pulse rather weak; slight retching. Retching stopped.
		8 p.m.	$98^{\circ}4'$	—	—	
Mar. 19	8th	11 a.m.	$98^{\circ}4'$	80	—	Still improving. After this patient continued to improve, and was able to get up on the 21st, and made a rapid recovery without any bad symptoms.
Ap. 26	46th	—	—	—	—	Admitted General Hospital, Hobart, with paralysis of both legs. Still under treatment 28th May.

1. No inconvenience was experienced, and the serum was rapidly absorbed. On visiting the patient next morning, 17th instant, at 10 a.m., I found her very much better. The temperature normal, pulse 80. A great change had taken place. The membrane had nearly all separated and come away, only a small patch being visible on back of pharynx. Injected into left thigh 200 normal units of the serum, making 600 in all. I used the only form of anti-toxin in Tasmania at the time. After that I returned to Hobart, and did not see patient again, but I am informed by Mr. Key, the local chemist (there being no doctor at Bothwell), that she rapidly improved, and was able to get up on the 21st instant, and made a good recovery. I may mention that I inoculated a tube of agar-agar, intending to incubate it on my return to Hobart, but the tube was, unfortunately, broken in transit.

On 26th April, since the above was written, patient was admitted into the General Hospital, Hobart, suffering from partial paralysis of both legs, the right one being the worst. At the present time (28th May) she is still under treatment, improving slowly.

TWO CASES OF DIPHTHERIA TREATED AT THE ADELAIDE CHILDREN'S HOSPITAL.

(These reports were compiled by Dr. Irwin, the Resident Medical Officer, and formed the basis of a clinical lecture by Dr. London.)

CASE I.

E. C., *et.* four years; ill forty-eight hours with sore throat, feverishness and vomiting; neck swollen for twenty-four hours; trouble with swallowing, not with breathing.

Date.	Day of Disease.	Time.	Pulse.	Resp.	Temp.	Remarks.
Ap. 1st	3rd	2 p.m. 6 p.m. 10 p.m.	160	32	100.4 100 100	Well-nourished child. Breathing rather noisy. Tonsils swollen and red. Patches on both tonsils, and on anterior pillar of fauces on the left side. Glands on both sides enlarged.
2nd	4th	2 a.m. 6 a.m. 10 a.m. 2 p.m. 6 p.m. 10 p.m.	160	32	102.6° 103 103.2 103 103 102.6°	Breathing noisy, but not laboured. Patch on left side has extended, and now involves edge of uvula and soft palate. Profuse nasal discharge. 2.30 p.m., 2.50 c.c.m. of Schering's anti-toxin injected into back; 7.15 p.m., injection repeated. No albumen in urine.
3rd	5th	2 a.m. 6 a.m. 10 a.m. 2 p.m. 6 p.m. 10 p.m.	120	28	101.4 100 99 99.4 99.2 99.6	Breathing noisy and child very restless, until 2 a.m., when breathing became quiet, and child slept soundly. Membrane on both sides rather increased, but edges are well defined, and separation seems to be beginning. Nasal discharge ceased. No albumen in urine.
4th	6th	2 a.m. 6 a.m. 10 a.m. 2 p.m. 6 p.m. 10 p.m.	116	26	99.2 98.8 98.6 97.2 98 97.6	Child worse during night, but better in the morning. Nasal discharge has returned. Membrane as before. No albumen in urine. Glandular swelling decreasing.
5th	7th	2 a.m. 6 a.m. 10 a.m. 2 p.m. 6 p.m. 10 p.m.	100	24	98.2 98.4	All membrane has come away from right side, and a little from the left. Nasal discharge ceased; child comfortable. No albumen in urine.
6th	8th	6 a.m. 6 p.m.	96	24	97.6 98.4	Membrane rapidly separating. Glands not enlarged.
7th	9th	6 a.m. 10 p.m.			98.4 98.4	Membrane entirely separated. Scarring left.

CASE II.

H. C., *et.* 3½ years. Ill 36 hours with swelling under each jaw and sore throat. No difficulty in swallowing or breathing, but breathes as if nose was stopped up. Is very feverish.

Date	Day of Disease.	Time.	Pulse.	Resp.	Temp.	Remarks.
Ap. 4th	2nd.	2 p.m. 6 p.m. 10 p.m.	124	28	100° 101.6° 102.2°	Herpes on lips. Tongue thickly coated. Tonsils, pharynx, and soft palate very red and swollen, with yellowish patch size of a threepenny piece on left tonsil. Glands on both sides enlarged. Anti-toxin (Schering's) 2.50 cm. at 2 p.m.
5th	3rd	2 a.m. 6 a.m. 10 a.m. 2 p.m. 6 p.m. 10 p.m.	128	28	100.6° 99.4° 99.6° 100° 100° 101°	No nasal discharge. Breathing not labored. Child will take no food. Throat as before. Anti toxin, 2.50 cc.m. at 2 p.m. No albumen in urine.

CASE II.—CONTINUED.

Date.	Day of Disease.	Time.	Pulse.	Resp.	Temp.	Remarks.
Ap.		2 a.m.			98.4°	
6th	4th	6 a.m.			98.4°	
		10 a.m.	92	32	98.6°	Redness of fauces and pharynx much less. Glandular swelling decreasing. Membrane as before. Nutrient enemata every four hours, as child will take no food.
		2 p.m.			99.8°	
		6 p.m.			100.2°	
		10 p.m.			99.2°	
7th	5th	2 a.m.			99°	
		6 a.m.			98.2°	
		10 a.m.	92	28	99.4°	Membrane smaller and cleaner. No albumen in urine.
		2 p.m.			99°	
		6 p.m.			98.8°	
		10 p.m.			99.2°	
8th	6th	2 a.m.				
		6 a.m.				
		10 a.m.	92	26	98.8°	Membrane all came away. Throat still a little red. Glands can hardly be felt.
		2 p.m.				
		6 p.m.			99°	
		10 p.m.				
9th	7th	6 a.m.			98.2°	
		6 p.m.	84	24	97.4°	No albumen in urine.
10th	8th	6 a.m.			98.4°	
		6 p.m.			97.8	Child now takes food all right.

DIPHTHERIA ANTITOXIN AT THE HOSPITAL FOR SICK CHILDREN, SYDNEY.

DR. LITCHFIELD reports the following twenty-one cases of diphtheria treated by anti-toxin at the Children's Hospital, under the charge of Dr. Clubbe, being a continuation of the series commenced in March issue of the *Gazette*.

In each case the Klebs-Loeffler bacillus was demonstrated by a serum culture from a throat swab.

CASE 7.—Girl, two years and eight months; admitted 2nd March; discharged 12th March; said to be ill seven days. *On Admission*: Nutrition good; temperature, 98°; tongue furred; pulse 100, fair strength; lungs clear; urine contained no albumen; no nerve symptoms. *Local*: Patch of membrane on the back part of both tonsils and on the uvula. On March 3rd, Ruffer's antitoxin, 10cc., was injected. Three days later the throat was quite clear; albumen never appeared in the urine, and no nerve symptoms developed.

CASE 8.—Girl, one year and seven months; admitted 13th March; died 15th March; said to be ill fourteen days. *On admission*: Nutrition fair; temperature 99.6°; tongue furred; has been vomiting; pulse, 100, soft; respiration 21; has a croupy cough; no dyspnoea; urine contains albumen; no nerve symptoms. *Local*: Both tonsils are ulcerated and covered with a dirty slough; croupy cough; no laryngeal obstruction. Antitoxin (Ruffer's) 20cc. was injected at once; in twenty-four hours 10cc. of same was injected; on the 14th, before the second injection was made, the pulse suddenly dropped to 60, with signs of failing circulation. In spite of stimulants, the pulse got worse, and the child died next morning from heart failure.

CASE 9.—Girl, six years; admitted 3rd March;

discharged 17th March; said to be ill four days. *On admission*: Nutrition fair; child prostrated; temperature 101.6°; tongue furred; pulse 136; respiration 28, quiet; no albumen; no nerve symptoms. *Local*: Adherent membrane on both tonsils; glands in neck slightly swollen; antitoxin 20 c.c. R. was injected on March 3rd; antitoxin 10 c.c. R. on March 4th. On the day after the second injection most of the membrane had come away, and the glands in the neck were reduced in size. A dirty exudation remained on the tonsils for six days after this date. This was not membrane, and was probably due to associated organisms. The temperature remained up for four days after admission. A trace of albumen appeared in the urine four days after admission. She went out very well.

CASE 10.—Boy, four years; admitted 12th March; died, 18th March; said to be ill three days; has had a poisoned wound of the left foot for a week. *On admission*: Nutrition fair; is peevish and atonic; temperature, 98.6°; tongue furred; vomits after food; pulse 108, weak; respirations 36, quiet; urine contains a considerable quantity of albumen, and numerous renal casts and epithelial cells; no nerve symptoms. *Local*: Both tonsils are ulcerated and covered with a dirty slough; breath is offensive, and there is some brawny infiltration on the left side of the neck; 20 c.c. R. antitoxin was injected on March 12th, 10 c.c. on the 13th, and 10 c.c. on the 14th. On the 13th he developed urticaria. This lasted two days; on the 16th the pulse suddenly dropped to 60, with signs of failing circulation. He never rallied from this condition, and died on the 18th. On the 17th he had several fits, probably uræmic in nature. Towards the end he had partial anuria, due probably as much to the failing circulation as to the kidney condition. The condition of the throat and the urine on admission

make it probable that he was ill for a longer time than he was said to be.

CASE 11.—Girl, four years; admitted 26th February; discharged 18th March; said to be ill two days. *On admission:* Nutrition good, tone good; temp. 100.8; tongue furred; pulse 160; respiration 30; croup, stridor and recession; urine contained no albumen; no nerve symptoms. *Local:* Fauces congested, no membrane; laryngeal obstruction. Tracheotomy was performed soon after admission. February 27th: Is coughing up a quantity of thin clean membrane through the tube; is not much distressed; anti-toxin 20cc. (Ruffer) injected. Next day the silver tube was replaced by a rubber one, and the following day that was left out. The temperature fell to normal the same day. The pulse soon quietened down after the operation. Twelve days after the injection she developed urticaria. This lasted two days. Convalescence was otherwise uneventful.

CASE 12.—Boy five years and five months; admitted 7th March; discharged 19th March; said to be ill five days. *On admission:* Nutrition good; tone fair; temp. 100°; pulse 120, rather soft; respirations 28, quiet; urine contained albumen; no nerve symptoms. *Local:* Each tonsil was covered by an adherent patch of membrane, and there was some glandular swelling in the neck; anti-toxin 20cc. (Ruffer) injected at once; anti-toxin 10cc. (Ruffer) injected next day. The day after the second injection the throat was clear, and the glandular swelling reduced. The temperature fell to normal that same day. Urticaria developed eight days after the first injection. A trace of albumen in the urine persisted till discharge. Convalescence otherwise was uneventful.

CASE 13.—Boy, four years; admitted 4th March; discharged 27th March; said to be ill four days. *On admission:* Nutrition good, tone good; temp. 101°; tongue furred; pulse 144; respirations 24; croup, stridor and recession; urine contained albumen and a few renal casts; no nerve symptoms. *Local:* There was a patch of membrane on the right tonsil; laryngeal obstruction. Tracheotomy was performed soon after admission, and anti-toxin 20cc. (Ruffer) injected, anti-toxin 10cc. (Ruffer) was injected next day, anti-toxin 10cc. (Ruffer) was injected day after. Four days after the first injection the temperature was normal, the throat was clear, and the tracheotomy tubes were left out. The pulse ranged between 80 and 100 during convalescence. The albumen disappeared from the urine in eleven days.

CASE 14.—Girl, 3 years 4 months; admitted 12th March, discharged 28th March; said to be ill ten days. *On admission:* Nutrition good; tone fair; temp. 100°; tongue furred; pulse 120, soft; respirations 24, quiet; urine contained albumen and renal casts. *Local:* On the back of the pharynx there were two thick patches of membrane and a few white specks on the right tonsil, with slight glandular swelling. On 13th March anti-toxin 20 cc. (R.) was injected. On 14th March anti-toxin 10 cc. (R.) was injected. In four days the throat was clear, and the temperature normal. The pulse during convalescence ranged between 90 and 120. The albumen in the urine had diminished to a trace at the time of discharge.

CASE 15.—Boy, 5½ years; admitted 14th March, discharged 30th March; said to be ill four days. *On admission:* Nutrition good; tone good; temp. 100°; pulse 140, respiration 20, croup stridor and considerable recession; urine contained no albumen and there were no nerve symptoms. *Local:* On the left tonsil there was a patch of adherent membrane; laryngeal obstruction. Tracheotomy was performed at once, and 20cc.

of anti-toxin (Ruffer's) injected. Next day 10cc. of anti-toxin was injected. In two days the throat was clear; in four days the tubes were left out, and the temperature was normal. The pulse during convalescence ranged between 70 and 100, but never gave any anxiety.

CASE 16.—Boy two years; admitted 8th March, 1895; discharged 31st March, 1895; said to be ill four days. *On admission:* Nutrition good, tone fair, temp. 100, tongue furred, pulse 120, soft, respirations 20, croup and stridor. Urine contained albumen. There were no nerve symptoms. *Local:* Membrane on both tonsils and uvula. Slight laryngeal obstruction. Some enlargement of the glands in the neck. Antitoxin, 20 cc. (Ruffer), was injected at once, 10 cc. next day, and 10 cc. day after. On the 12th the throat was quite clear, the croup gone and the glands reduced in size. During early convalescence he showed signs of heart failure. The urine contained albumen for 15 days. On the 22nd he developed urticaria.

CASE 17.—Boy seven years; admitted 16th March; said to be ill six days. *On admission:* Nutrition good, tone fair, temp. 100, tongue furred, pulse 120, respiration 24, quiet, urine contained no albumen. No nerve symptoms. *Local:* Patches of membrane on both tonsils, membrane could be seen in one nostril, and there was considerable swelling of the glands in the neck. Antitoxin 20 cc. (Ruffer) was injected at once. Two days later the throat was clear, nothing could be seen in the nostrils, and the glands in the neck were reduced in size. The temperature fell to normal on the same day. During the early part of convalescence the pulse ranged from 60 to 80 and gave some anxiety. It improved before discharge, ranging from 80 to 112.

CASE 18.—Boy aged four; admitted 19th March, 1895, discharged 31st March, 1895, said to be ill six days. *On admission:* Nutrition good, tone good, temp. 98, tongue furred, pulse 90, respirations 20. Urine contained no albumen, no nerve symptoms. *Local:* Patches of membrane on both tonsils, some swelling of the glands in the neck. On the 22nd, the condition was much the same, and anti-toxin, 16 c.c. Ruffer, was injected. On the 26th, the local condition had cleared up and the temperature was normal. Convalescence was uneventful.

CASE 19.—Girl, six years eight months; admitted 22nd March; died 1st April; said to be ill four days. *On admission:* Nutrition fair; tone poor; temperature 100°; pulse 140, soft; respirations 30, tonsillar. Urine contains albumen and a few tube casts; no nerve symptoms. *Local:* Uvula tonsils and soft palate are covered with a dirty-looking, adherent membrane; the breath is foul, and there is considerable swelling in the neck. Anti-toxin (Ruffer's) 30cc. was injected on 22nd March, anti-toxin (Ruffer's) 10cc. on 23rd March, anti-toxin (Ruffer's) 10cc. on 24th March. By the 28th the local condition had cleared up, but the amount of albumen in the urine had increased to ½, and the pulse was slow (eighty) and very soft. In spite of free stimulation, the cardiac asthenia increased, and she died of heart failure on 1st April.

CASE 20.—Girl, nine years; admitted 26th March; discharged 2nd April; said to be ill four days. *On admission:* Nutrition good; tone good; temperature 101.5°; pulse 118; respirations 18; no albumen in the urine, and no nerve symptoms. *Local:* There is a patch of membrane on both tonsils. Anti-toxin 18cc. (Ruffer's) was given at once. The throat was clear of membrane three days later. The pulse ranged from 70-90 during convalescence, but gave no anxiety.

CASE 21.—Girl, five years six months; admitted 4th April; died 5th April; said to be ill eight days. *On admission:* Nutrition poor; tone poor; very bad

colour (grey); temperature 102.4°; tongue furred; has been vomiting; pulse 144, small and soft; respirations 44; tonsillar. Urine contains $\frac{1}{2}$ albumen and numerous tube casts. Has palate paralysis. *Local*: Uvula, tonsils, and palate are covered with a dirty-looking membrane. The breath is foul, and there is some brawny swelling in the neck. Anti-toxin 6cc. (Aronson's) before admission, anti-toxin 10cc. (Behring's No. 8) on 4th April, anti-toxin 10cc. (Behring's No. 1) on 5th April. The anti-toxin seemed to have no effect, and she died on 5th April from syncope due to toxæmia.

CASE 22.—Boy three years three months; admitted 24th March; discharged 7th April; said to be ill five days. *On admission*: Nutrition good; tone fair; temperature 100°; pulse 120; respirations 20; has a croupy cough and inspiratory stridor. There is no albumen in the urine, and no nerve symptoms. *Local*: The fauces are red, no membrane; croup and stridor. Anti-toxin 12cc. (Ruffer's) was injected at once. In six days his croup had disappeared. Convalescence was uneventful.

CASE 23.—Girl, ten months; admitted 8th April; died 9th April; said to be ill four days. *On admission*: Nutrition good; tone fair; temperature 104°; pulse 164; respirations 40; croup, stridor and recession. The urine was not saved for examination, and there were no nerve symptoms. *Local*: Patch of membrane on the uvula; laryngeal obstruction. Tracheotomy was performed at once, and anti-toxin (No. 1 Behring's) was injected. Next day there was membrane on both tonsils, and very great dyspnoea, and she died of asphyxia, apparently before the anti-toxin had time to exert any beneficial influence.

CASE 24.—Boy, thirteen months; admitted 16th April; died 18th April; said to be ill a week. *On admission*: Nutrition poor; tone poor; temperature 100°; pulse 140; respirations 40; croup, stridor and recession; the urine contained albumen; no nerve symptoms. *Local*: Throat red; no membrane; laryngeal obstruction. Tracheotomy was performed immediately, and anti-toxin (No. 1 Behring's) was injected. Next day the injection was repeated. In spite of this, extreme dyspnoea set in, and he died of asphyxia on 18th April.

CASE 25.—Girl, four years seven months; admitted 2nd April; discharged 21st April; said to be ill three days. *On admission*: Nutrition fair; tone fair; temperature 98°; pulse 132; respirations 18; the urine contained a trace of albumen; no nerve symptoms. *Local*: There was a patch of dirty-looking membrane on both tonsils. Anti-toxin (10 cc. Ruffer) was injected at once. In four days the membrane had disappeared from the throat. A trace of albumen in the urine persisted till discharge. The pulse during convalescence ranged between 80 and 120, and was very soft at times. She developed urticaria on 10th April.

CASE 26.—Boy, three years; admitted 31st March; discharged 25th April; said to be ill three days. *On admission*: Nutrition good; tone fair; temperature 100.6°; pulse 148; respirations 40; croup, stridor and recession; the urine contained albumen; no nerve symptoms. *Local*: The fauces were red; no membrane seen; laryngeal obstruction. Tracheotomy was performed immediately, and anti-toxin (16 cc. Ruffer) was injected. This injection was repeated on 2nd April. In four days the tubes were left out, and the temperature, pulse and respirations fell to normal. The urine contained albumen for eight days, and he developed urticaria on 9th April.

CASE 27.—Girl, seven years; admitted 12th April; discharged 26th April; said to be ill five days. *On*

admission: Nutrition good; tone good; temperature 98°; pulse 84; respiration 20. The urine contained no albumen, and there were no nerve symptoms. *Local*: Patches of membrane obtained on tonsils, palate, and pharynx. Anti-toxin (No. 1 Behring's) was injected at once. In three days the throat was clear. Convalescence was uneventful.

CASE 28.—Girl, two years and seven months; admitted 30th March; discharged 30th April; said to be ill a week. *On admission*: Nutrition good; tone fair; temperature 100°; pulse 140; respirations 40; croup, stridor, and recession; urine contains albumen, and she had palate paralysis. *Local*: Throat red; laryngeal obstruction. Tracheotomy was performed at once, and 20cc. Ruffer's anti-toxin injected. In four days the tubes were left out, and the temperature, pulse, and respirations were normal. The albumen disappeared from the urine in ten days. The paralysis lasted twenty-five days.

CASE 29.—Girl, three years; admitted 1st April; discharged 1st May; said to be ill four days. *On admission*: Nutrition good; tone fair; temperature 100°; pulse 120; respirations 24; croup and stridor; the urine contains no albumen; no nerve symptoms. *Local*: Patch of membrane on both tonsils; slight laryngeal obstruction. Anti-toxin 12cc. (Ruffer) was injected at once. In four days the throat and larynx were quite clear. The temperature had fallen to normal two days before. Urticaria developed on the tenth day.

CASE 30.—Girl, three years four months; admitted 5th April; discharged 2nd May; said to be ill a week. *On admission*: Nutrition fair; tone fair; temperature 99°; pulse 120; respirations 30; urine contains albumen; no nerve symptoms. *Local*: Patch of membrane on left tonsil; slight glandular swelling. Anti-toxin 15cc. (Ruffer) was injected at once. In four days the local trouble had cleared up. The albumen disappeared from the urine in eight days. Urticaria developed on the twelfth day.

CASE 31.—Girl, three years five months; admitted 19th March; discharged 6th May; said to be ill four days. *On admission*: Nutrition good; tone good; temperature 102°; pulse 180; respiration 32; croup, stridor, and recession; great cyanosis; urine contains albumen and a few casts; no nerve symptoms. *Local*: Small patches on each tonsil; extreme laryngeal obstruction. Tracheotomy was performed at once, and anti-toxin 20cc. (Ruffer) injected. On 20th 10cc. injected, on 21st 10cc., and on 22nd 20cc., making altogether 60cc. of Ruffer's anti-toxin. For several days there was extreme dyspnoea. The tubes were finally left out on the sixth day. Urticaria developed on the seventh day. The albumen disappeared from the urine in fourteen days. Convalescence was slow.

CASE 32.—Boy, two years seven months; admitted 28th March; discharged 7th May; said to be ill three days. *On admission*: Nutrition good; tone fair; temperature 100°; pulse 140; respirations 24; croup, stridor, and recession. The urine contained albumen; no nerve symptoms. *Local*: Patch of membrane on each tonsil. Anti-toxin 20cc. (Ruffer) was injected, and soon after tracheotomy had to be performed. In six days the tubes were left out, and the throat was clear. During convalescence he developed palate paralysis. The albumen disappeared from the urine in fourteen days.

CASE 33.—Girl, three years nine months; admitted 18th April; discharged 9th May; said to be ill a week. *On admission*: Nutrition good; tone fair; temperature 99°; pulse 112; respiration 24; croup; no

dyspnoea. Urine contains albumen; no nerve symptoms. *Local*: Patch of membrane on right tonsil; nasal discharge, and slight glandular swelling. Anti-toxin (No. 1 Behring's) was injected at once. In five days the local trouble had cleared up. The albumen persisted in the urine for twenty days.

CASE 34.—Girl, four years; admitted 1st May; discharged 9th May; said to be ill a week. *On admission*: Nutrition good; tone good; temperature 100°; pulse 100; respirations 26 (quiet); no albumen in urine, and no nerve symptoms. *Local*: Patch of membrane on each tonsil; some glandular swelling. Anti-toxin 18cc. (Ruffer) was given at once. In four days the membrane and swelling had gone. Convalescence was uneventful.

CASE 35.—Girl, five years; admitted 24th April; discharged 18th May; said to be ill five days. *On admission*: Nutrition fair; tone fair; temperature 100°; pulse 160; respirations 24; croup, stridor, and recession. Urine contains no albumen; no nerve symptoms. *Local*: Patch of membrane on right tonsil; laryngeal obstruction. Tracheotomy was performed at once, and 16 cc. anti-toxin (Ruffer) was injected. In three days the tubes were left out, and the throat was clear. Urticaria developed on the sixteenth day.

CASE 36.—Girl, six years and a-half; admitted 6th May; discharged 14th May. Said to be ill two days. *On admission*: Nutrition good, tone good; temperature 99°; pulse 100; respirations 16; croup; urine contains no albumen; no nerve symptoms. *Local*: Patch of thin membrane on both tonsils. Anti-toxin No. 1 (Behring's) was injected at once. In five days the local disturbance had subsided. Convalescence was uneventful.

CASE 37.—Girl, one year and three months; admitted 2nd April; died 16th May; said to be ill a week. *On admission*: Nutrition fair, tone fair; temperature 100°; pulse 130; respirations 28; croup, stridor and recession; the urine contains albumen; no nerve symptoms. *Local*: Throat red; laryngeal obstruction. Tracheotomy was performed, and anti-toxin 16cc. (Ruffer) injected. In four days the tubes were out. Later on she developed palate paralysis. Pleurisy and broncho-pneumonia intervened, from which she ultimately died.

CASE 38.—Girl, one year and eight months; admitted 14th May; died 17th May; said to be ill six days. *On admission*: Nutrition poor, tone poor; temperature 100°; pulse 148; respirations 42; croup, stridor and recession. Urine contains albumen. No severe symptoms. *Local*: A few raised specs on both tonsils; extreme laryngeal obstruction. Tracheotomy was performed at once, and No. 1 Behring's anti-toxin injected. The injection was repeated on the next two days. In spite of this the dyspnoea gradually increased till 17th May, when she died of asphyxia.

CASE 39.—Girl, eight years five months; admitted 16th May; discharged 19th May; said to be ill two days. *On admission*: Nutrition good, tone good; temperature 98°; pulse 100; respirations 24; croup and stridor. No albumen in urine; no nerve symptoms. *Local*: Thin membrane on each tonsil; slight laryngeal obstruction. Anti-toxin No. 1 (Behring's) was injected at once. In four days the throat was clear and the croup gone. Convalescence was uneventful.

CASE 40.—Girl, eight months; admitted 1st May; discharged 19th May; said to be ill five days. *On admission*: Nutrition good; tone fair; temperature 100°; pulse 140; respirations 32; croup, stridor and recession; the urine contains albumen; no nerve symptoms. *Local*: Patch of raised membrane on both tonsils; some laryngeal obstruction. Anti-toxin 10 cc. (Ruffer) had been given the day before admission. In

five days the local disturbance had subsided. The temperature remained irregular for a few days later. Palate paralysis developed during convalescence. She went out very well.

CASE 41.—Boy, 4 years; admitted 21st May; died 22nd May; said to be ill five days. *On admission*: Nutrition fair; tone bad; temperature 102°; pulse 136, very soft; respirations 36; croup, stridor and recession; the urine was not saved; no nerve symptoms. *Local*: Both tonsils were ulcerated and covered with a dirty-looking membrane; considerable laryngeal obstruction. Tracheotomy was performed at once, and No. 8 Behring's anti-toxin injected. The anti-toxin seemed to have no effect, and he died next day from syncope due to toxæmia.

CASE 42.—Boy, two years nine months; admitted 9th May; discharged 23rd May; said to be ill three days. *On admission*: Nutrition good; tone good; temperature 100°; pulse 120; respirations 24; croup, stridor and recession; the urine contains albumen; no nerve symptoms. *Local*: Small patch of membrane on each tonsil; some laryngeal obstruction. Anti-toxin (No. 1 Behring's) was injected at once. Three days later all trace of croup and membrane disappeared. The albumen disappeared from the urine in about six days.

CASE 43.—Girl, one year three months; admitted 29th April; discharged 23rd May; said to be ill two days. *On admission*: Nutrition fair; tone poor; pulse 140; respirations 48; croup, stridor and recession; the urine contains albumen; has palate paralysis. *Local*: Membrane on both tonsils; laryngeal obstruction. Tracheotomy was performed at once, and 13cc. Ruffer's anti-toxin injected. In four days the tubes were out, and the throat clear. The paralysis lasted twenty days. The albumen disappeared from the urine in ten days. Urticaria developed on the ninth day.

CASE 44.—Boy, six years; admitted 6th May; discharged 26th May; said to be ill two days. *On admission*: Nutrition good; tone good; temperature 101°; pulse 124; respirations 24. Urine contains no albumen; no nerve symptoms. *Local*: Patch of membrane on left tonsil. Anti-toxin (No. 1 Behring's) was given at once. In four days the throat was clear, and the temperature normal. During convalescence the pulse gave considerable anxiety, ranging from 60 to 70, irregular, and weak at times.

CASE 45.—Girl, two years; admitted 25th May; died 27th May; said to be ill seven days. *On admission*: Nutrition fair; tone poor; temperature 101°; pulse 170; respirations 36; croup, stridor, and recession. The urine contains albumen; no nerve symptoms. *Local*: Throat red; extreme laryngeal obstruction. Tracheotomy was performed at once, and 15cc. anti-toxin (Ruffer) injected. The temperature ranged between 103° and 105° next day, and dyspnoea set in, and increased till the day after, when she died, asphyxiated.

CASE 46.—Girl, five years and a half; admitted 19th May; remaining 31st May; said to be ill two days. *On admission*: Nutrition good; tone good; temperature 99°; pulse 100; respirations 20; croup and stridor. Urine contains no albumen; no nerve symptoms. *Local*: Thin membrane on both tonsils; slight laryngeal obstruction. Anti-toxin 20cc. (Ruffer) was injected at once. In three days the local disturbance had cleared up. Convalescence was speedy and uneventful.

CASE 47.—Boy, three years six months; admitted 16th March; remaining 31st May; said to be ill four days. *On admission*: Nutrition fair; tone poor;

temperature 100°; pulse 176; respirations 36; croup, stridor, and recession; the urine contains albumen and casts; no nerve symptoms. *Local*: Dirty membrane on each tonsil; extreme laryngeal obstruction. Tracheotomy was performed at once, and anti-toxin (No. 3 Behring's) was injected. Next day No. 1 Behring's, and the day after 15cc. Ruffer was injected. For five days the dyspnoea was extreme. Palate paralysis soon supervened, and lasted a month. Convalescence was very tardy.

CASE 48.—Boy, six years; admitted 29th April; remaining 31st May; said to be ill three days. *On admission*: Nutrition good; tone good; temperature 100°; pulse 152; respirations 40; croup, stridor, and recession; the urine contains albumen; no nerve symptoms. *Local*: Throat red; extreme laryngeal obstruction. Tracheotomy was performed immediately, and anti-toxin 16cc. (Ruffer) injected. Next day 10cc. was again injected. In five days the tubes were out, and the temperature normal. Palate paralysis developed on 4th May, and lasted ten days. Convalescence has been slow.

CASE 49.—Boy, three and a-half years; admitted 29th April; remaining 31st May, said to be ill seven

days. *On admission*: Nutrition good; tone good; temperature 100°; pulse 140; respirations 28; croup, stridor and recession; the urine contains albumen; no nerve symptoms. *Local*: Membrane on both tonsils; considerable laryngeal obstruction. Tracheotomy was performed at once, and anti-toxin 20cc. (Ruffer) injected; next day 10cc. was injected, and the next day 20cc. For five days there was extreme dyspnoea. Palate paralysis developed on 3rd May, and lasted 24 days. Convalescence has been slow. He had urticaria.

CASE 50.—Girl, five years; admitted 8th May, remaining 31st May; said to be ill seven days. *On admission*: Nutrition good; tone good; temperature 97°; pulse 130; respirations 40; croup, stridor and recession; urine contains albumen; no nerve symptoms. *Local*: Small patch on left tonsil; laryngeal obstruction. Tracheotomy was performed at once, and 20cc. anti-toxin injected. The tubes were left out in five days. The albumen disappeared in three days from the urine. Urticaria developed on 12th May.

N.B.—In cases No. 12 and No. 14 palate paralysis has developed since the above was written.

SYDNEY CHILDREN'S HOSPITAL CASES TABULATED.

Case.	Age.	Anti-toxin used.	Day of disease when injected.	Needed Operation.	Urine.	Condition before Injection.	Post-diphtheritic conditions.	Result.	Cause of death.
7	2 8-12	10 cc. Ruffer	8th	Not	No alb.	Not serious	Nil.	Cured	
8	1 7-12	20 cc. Ruffer & 10 cc. "	14th and 15th	Not	$\frac{1}{2}$ alb.	Serious	Heart failure	Died	Post-diphtheritic heart failure.
9	6	20 cc. Ruffer & 10 cc. "	4th and 5th	Not	Trace alb.	Serious	Nil.	Cured	
10	4	20 cc. Ruffer & 10 cc. " 10 cc. "	?	Not	Alb. & renal casts; partial anuria	Serious	Heart failure	Died	Post-diphtheritic heart failure.
11	4	20 cc. Ruffer	3rd	Tracheotomy	No alb.	Serious	Nil.	Cured	
12	5 5-12	20 cc. Ruffer & 10 cc. "	5th and 6th	Not	Alb. present	Serious	Palate paralysis	Cured	
13	4	20 cc. Ruffer & 10 cc. " 10 cc. "	4th, 5th and 6th	Tracheotomy	Alb. and a few renal casts	Serious	Nil.	Cured	
14	3 4-12	20 cc. Ruffer & 10 cc. "	10th & 11th	Not	Alb. and renal casts	Serious	Palate paralysis	Cured	
15	5 6-12	20 cc. Ruffer & 10 cc. "	4th and 5th	Tracheotomy	No alb.	Serious	Nil.	Cured	
16	2	20 cc. Ruffer & 10 cc. " 10 cc. "	4th, 5th and 6th	Not	Alb. present	Very serious T	Cardiac asthenia	Cured	
17	7	20 cc. Ruffer	6th	Not	No alb.	Serious	Cardiac asthenia	Cured	
18	4	16 cc. Ruffer	9th	Not	No alb.	Not serious	Nil.	Cured	
19	6 8-12	30 cc. Ruffer 10 " 10 "	4th, 5th, and 6th	No	Albumen and casts	Very serious T	Heart failure. palate paralysis	Died	Post-diphtheritic heart failure

SYDNEY CHILDREN'S HOSPITAL CASES TABULATED.—Continued.

Case.	Age.	Anti-toxin used.	Day of disease when injected.	Needed Operation.	Urine.	Condition before Injection.	Post-diphtheritic conditions.	Result.	Cause of Death.
20	9	18 cc. Ruffer	4th	No	No albumen	Not serious	Nil.	Cured	
21	5 6-12	5 cc. Aronson 10 cc. Behring No. 3 10 cc. Behring No. 1	7th, 8th, and 9th	No	Albumen and casts	Very serious T	Palate paralysis	Died	Toxæmia
22	3 3-12	12 cc. Ruffer	5th	No	No alb.	Not serious	Nil.	Cured	
23	10 mos.	10 cc. Behring's No. 1	4th	Tracheotomy	?	V'y ser's A	Nil.	Died	Asphyxia
24	13 mos.	10 cc. Behring's No. 1 10 cc. Behring's No. 1	7th and 8th	Tracheotomy	Albumen	Very serious A	Nil.	Died	Asphyxia
25	4 7-12	10 cc. Ruffer	3rd	No	Albumen	Serious	Cardiac asthenia	Cured	
26	3	16 cc. Ruffer 16 cc. „	3rd and 5th	Tracheotomy	Albumen	Serious	Nil.	Cured	
27	7	10 cc. Behring's No. 1	5th	Nil.	No alb.	Not serious	Nil.	Cured	
28	2 7-12	20 cc. Ruffer	7th	Tracheotomy	Albumen	Serious	Palate paralysis	Cured	
29	3	12 cc. Ruffer	4th	No	Trace alb.	Serious	Nil	Cured	
30	3 4-12	15 cc. Ruffer	7th	No	Albumen	Serious	Nil	Cured	
31	3 5-12	20 cc. Ruffer 10 cc. Ruffer 10 cc. Ruffer 10 cc. Ruffer 10 cc. Ruffer	4th 5th 6th 7th 7th	Tracheotomy	Albumen and casts	Very serious A	General asthenia	Cured	
32	2 7-12	20 cc. Ruffer	3rd	Tracheotomy	Alb.	Serious	Palate paralysis	Cured	
33	3 9-12	No. 1 Behring's	7th	No	Alb.	Serious	Nil	Cured	
34	4	18 cc. Ruffer	7th	No	No alb.	Not serious	Nil	Cured	
35	5	16 cc. Ruffer	5th	Tracheotomy	No alb.	Serious	Nil	Cured	
36	6½	No. 1 Behring's	2nd	No	No alb.	Not serious	Nil	Cured	
37	1 3-12	16 cc. Ruffer	7th	Tracheotomy	Alb.	Serious	Palate paralysis	Died	Broncho-pneumonia, 5 weeks later.
38	1 8-12	No. 1 Behring's No. 1 Behring's No. 1 Behring's	6th 7th 8th	Tracheotomy	Alb.	Very serious A	Nil	Died	Asphyxia.
39	8 5-12	No. 1 Behring's	2nd	No	Trace albumen	Not serious	Nil	Cured	
40	8 mos.	10 cc. Ruffer	4th	No	Albumen	Serious	Palate paralysis	Cured	
41	4	No. 3 Behring's	5th	Tracheotomy	Not tested	Very serious T	Nil	Died	Toxæmia

SYDNEY CHILDREN'S HOSPITAL CASES TABULATED.—*Continued.*

Case.	Age.	Anti-toxin used.	Day of disease when Injected.	Needed Operation.	Urine.	Condition before Injection.	Post-diphtheritic conditions.	Result.	Cause of death.
42	2 9-12	No. 1 Behring's	3rd	No	Alb.	Serious	Nil	Cured	
43	1 3-12	15 cc. Ruffer	2nd	Tracheotomy	Alb.	Serious	Palate paralysis	Cured	
44	6	No. 1 Behring's	2nd	No	No albumen	Not serious	Cardiac asthenia	Cured	
45	2	15 cc. Ruffer	7th	Tracheotomy	Albumen	Very serious A	Nil	Died	Asphyxia
46	5½	20 cc. Ruffer	2nd	No	No albumen	Not serious	Nil	Cured	
47	3½	No. 3 Behring's No. 1 Behring's 15 cc Ruffer	4th 6th 7th	Tracheotomy	Albumen & casts	Very serious A	Palate paralysis and general asthenia	Cured	
48	6	16 cc. Ruffer 10 cc. Ruffer	3rd 4th	Tracheotomy	Albumen	Serious	Palate paralysis	Cured	
49	3½	20 cc. Ruffer 10 cc. Ruffer 20 cc. Ruffer	7th 8th 9th	Tracheotomy	Albumen	Very serious A	Palate paralysis	Cured	
50	5	20 cc. Ruffer	7th	Tracheotomy	Albumen	Serious	Nil	Cured	

REMARKS ON THE TABLE.—It will be noticed that a column showing the condition of the urine has been added. Under the column headed "Condition before injection," we use the following terms:—

Very serious, to mean cases that would in all probability quickly prove fatal if anti-toxins were not used. Death may be threatened from toxæmia, or from asphyxia, i.e., after tracheotomy has been performed. Hence we shall append T where the former is meant, and A where the latter. With regard to the two cases in the above list, that died, it may be said that neither was very serious on admission, the heart failure occurring later on, suddenly, as it often does. *Serious*, to mean cases not in immediate danger, but likely to become worse.

Not serious, to mean mild cases that would probably get well without antitoxin.

ANTI-TOXIN TREATMENT OF DIPHTHERIA.

BY R. R. HARVEY, M.B., CH.B., OF WENTWORTH, N.S.W.

J. E. W., *et.* 20 (F.), admitted to Wentworth Hospital April 20, 1895, states that in the morning (having been at a dance the night before) she felt sick, and had a languid feeling, and at dinner time first noticed that it hurt her to swallow; also, she had vomited up some maizena she had taken. Seen at 4.30 by doctor, who advised her removal to hospital.

On admission at 5.30 thin white membrane covered the whole of each tonsil and the arch of the palate. Temp. 99°. Applied liq. ferri. mur. & glycerin. At 6.30 injected 10cc. of anti-toxin (obtained from Board of Health) at inner side of right shoulder blade. An hour later temperature had risen one degree, and the skin was moist. No other symptom was noticed, though patient said her shoulder was stiff and sore. From 9 p.m. temperature remained 99.4°.

April 21.—At 4 a.m., temp. 101.2°; at 6 a.m. and onwards, 100°. Said she felt all right. At 9.30 temp. 99.6°. Thick white membrane on both tonsils and arch of palate, and redness and swelling of mucous membrane, also glandular swelling. On taking culture, found the membrane loose. Liq. ferri. mur. & glyc. applied every four hours. 6 p.m.—Found patient evidently doing well. No more swelling or inflammation than this morning. Membrane had evidently been detached,

leaving an ulcerated-looking surface. Nurse said it came off on the swab. Injected 10cc. anti-toxin. Temp. rose from 100° to 101°. No albumen in urine. Less difficulty in swallowing, but some running away of saliva. Nurse says she looked very red and flushed this afternoon, but no rash.

April 22.—From midnight, when the temperature was 100°, patient slept well till 3.30, when the temperature was normal, and she seemed nice. At 7 a.m. temperature normal, and a very large discoloured piece of membrane came away. Throat very red and raw, patient very weak and prostrate, running a little at the mouth still. Had a little bread and milk, being the first she has taken. Temperature 99°.

April 23.—No urine saved, as patient is menstruating. Says she feels well; runs a little at the mouth still; speaks much better; still a little membrane on the right tonsil.

April 24.—Temperature normal; patient appears in natural health; slept all night. A little flow of saliva, and a little membrane on uvula and behind arch of palate to the right.

April 25.—Doing very well, but still a little membrane and nasal resonance in speech.

April 26.—Still a little membrane, not quite so much nasal resonance. No albumen in urine.

April 27.—Patient quite well; to be up; says her knees pain her when up; has had no rash.

May 1.—Patient is quite well, and anxious to get home.

EXTRACTS FROM CURRENT FOREIGN
MEDICAL LITERATURE.BY C. A. ALTMANN, F.R.C.S., E., OF PORT LINCOLN,
SOUTH AUSTRALIA.

Intestinal Resection at Trendelenburg's Clinic (Ernest Becker, Deutsch-Zeitchr. f. Chir., xxxix., & Centrbl. fur Chir., No. 6, 1895). The author gives a detailed and practically very valuable account of the experiences in the above operation at Trendelenburg's Clinic during the past ten years. The report refers to thirty-three cases, of which the youngest was nine, and the oldest sixty-nine years of age. Of this number twenty-four recovered and nine died, the cause of death in eight cases being purulent peritonitis, and in one peritoneal sepsis. In three of the fatal cases peritonitis was due to defective suturing. In order to help in estimating the value of this operation in the different diseases, the author divides the cases into acute and chronic, the former including cases of hernial gangrene and ileus, and the latter cases of artificial anus, fecal fistula, strictures and tumours. Of the first group 57 per cent. and of the second 77 per cent. of the patients recovered. The number of acute cases operated on amounted to seven, five of which were cases of gangrene of external hernia, one of ileus, and one of gangrene in an internal hernia. Of these only four recovered. Trendelenburg is therefore opposed to the operation in acute cases. The results were, however, much more favourable in the chronic cases. These consisted mainly of fecal fistulae, eleven of them resulting from gangrene in hernia (nine recoveries, two deaths), four from perityphilitis (all recoveries), and one from a kick on the abdomen (recovery). The remaining ten chronic cases were made up as follows:—Three cases of tubercular stricture, with two deaths from peritonitis, caused by inefficient suturing, and one recovery—the patient being in good health a year after operation; six cases of malignant disease, of which four died—two immediately after operation, and two within one and two months, from a recurrence of the disease—and two (both women, aged 55 and 47, with carcinoma of the sigmoid flexure) recovered, and were found to be well one and two years respectively after the operation. The last of the chronic cases was an operation for the radical cure of hernia, in which the sac was found to contain cecum and vermiform appendix, the latter of which was amputated, but for what reason is not clear (recovery).

Of particular interest in all these cases is the manner in which Trendelenburg operates. In a case of fistula, the abdomen is opened at some distance from the fistula, at a spot where the skin is not eczematous, i.e., 4-6 cms. above Poupart's ligament. The two pieces of intestine communicating with the fistula are, as a rule, seen at once. After all fecal matter has been squeezed out of them with the fingers, they are cut through at a sound spot, and their free extremities brought out at the abdominal wound. The stumps of intestine connected with the fistula are wrapped in gauze, and left *in situ* until the sewing together of the two free ends of the intestine has been completed, whereupon, and after having been pushed out through the fistulous opening by inverting them like the fingers of a glove, they are removed by using partly a blunt instrument and partly a knife. The fistulous wound is not sutured, but is drained by means of strips of gauze, and allowed to heal by second intention. It sometimes happens that several coils of intestine have become adherent around the fistula. In this case an assistant introduces a finger into the fistulous opening from the outside, to enable the operator to find the right coil.

The intestines are kept closed by the fingers of assistants, and intestinal compressors are never used.

The next important step (and this applies to all cases of intestinal resection) is the drainage of the abdominal cavity. It is done by means of sterilized (no. iodoform) gauze. Two strips are passed through the abdominal wound to the intestine, and so arranged that they surround the site of the suture from both sides. They absorb any secretions, and are only removed very slowly and carefully after the tenth or twelfth day. By this means the danger which any leakage of fecal matter through the intestinal wound might cause is considerably diminished.

The Prevalence of Hydatids in Hither-Pomerania (E. Peepert, Centrbl. f. Chirurgie, March 16th, 1895).—The author finds that hydatids are much more frequent in Hither-Pomerania (Vor-Pommern) than anywhere else in Germany. He has collected the records of 180 cases which have occurred in that district during the last 34 years, viz., from 1860 to 1894. Of this number 125 were observed in Greifswald, either privately or in hospital. During that period one out of every 66 *post-mortems* performed at Greifswald was found to be a case of hydatids. For every square 10 miles (German) of territory there were 8.33 cases of the disease. It was notably present at certain farms and villages, where two cases occurred for every 110 inhabitants. The quinquennium from 1860-65 showed the smallest (10), and the one from 1885 to 1890 the largest (43) number of cases. This increase the author attributes partly to improved diagnosis. The number of cases increased proportionately with the number of dogs kept (the author does not say *eaten*!) The proportion of dogs to inhabitants was in some villages as 1 to 7. As regards time of life, the ages from 30 to 40 were most frequently affected, the least so those between 1 and 10. Country labourers suffered most frequently, and amongst the other occupations there was a proportionately large number of shepherds, cowherds and butchers who had become affected. The numbers of males and females were nearly equal (51 per cent. and 49 per cent. respectively.) Cattle-breeding, sheep-farming, &c., which are carried on extensively in certain parts of Hither-Pomerania, have a considerable influence. For every 100 inhabitants there were 42.5 head of cattle, 185 sheep, and 38 pigs, and amongst these animals hydatids were very prevalent. Thus during a period of six months there were found in the district of Greifswald suffering from hydatids 64.28 per cent. of cattle, 51 per cent. of sheep, and 4.9 per cent. of pigs, a state of affairs contrasting markedly with the figures for a similar period furnished by Further-Pomerania (Hinterpommern), which were 2 per cent., 2.21 per cent., and 0.83 per cent. respectively. The number of cases amongst the inhabitants of Hither-Pomerania was found to be in proportion to the prevalence of the disease amongst cattle and sheep. As regards the seat of the disease, it was in cattle principally the lungs and the liver in the proportion of eight to seven. In sheep the lungs were affected more frequently than the liver, proportion here being three to two. In pigs it was principally the liver (about 90 per cent.).

In human beings the organs affected were as follows:—The liver was the seat in 73 per cent. of the cases. Some of these were operated, others not. Of the not-operated ones, 67.3 per cent. died; of the operated ones, 79.5 per cent. were cured, 9.09 per cent. were relieved, and 11.6 per cent. died. In 34 instances the liver-hydatid was discovered first at the *post-mortem*. The lungs were the seat in 10.6 per cent. of the cases, of which 50 per cent. recovered without operative treat-

ment, the cyst being emptied spontaneously, and 25 per cent. were cured by operation; six per cent. (one case) died after operation, and 12 per cent. (two cases) died without an operation having been performed. In one instance the lung-cyst was discovered accidentally *post-mortem*. In 4 per cent. the *spleen* was the organ affected; 6 per cent. were found in the *muscles, skin, &c.*; 6.5 per cent. occurred in the *abdominal cavity and pelvic viscera*.

The Therapeutic Uses of Steam in Gynecology.—(L. Pincus, *Centralblt. f. Gynæc.*, March 16, 1895). The author has treated the following cases according to Snegirjoff's method, by the application of hot steam (see *Australasian Medical Gazette*, March, 1895, abstracts p. 101) viz., one case of cancer of the body of the uterus, three cases of uncomplicated endometritis hyperplastica, and five cases of cervical endometritis. The results were highly satisfactory. In the case of carcinoma, which had advanced too far for operation, fœtor and hæmorrhage ceased immediately after each application, and only reappeared after eight-eleven days. The pain was also considerably diminished. All the cases of endometritis hyperplastica were practically cured. Several applications were necessary. On the third day an abundant discharge appeared, which gradually ceased by the twelfth-fifteenth day, and the uterine cavity was then found to be clean. In one of these cases the application of the steam provoked severe uterine colic, which was relieved by the application of a solution of cocaine to the cervical canal. The cases of cervical endometritis had not been sufficiently long under observation to speak definitely of the ultimate results; but so far they were satisfactory, and justify the adoption of this method of treatment in other similar cases. The following is the author's method of procedure:—The boiler of an ordinary steam inhalation apparatus is connected by means of a piece of grey indiarubber tubing, with a Fritsch's or other similar catheter, with three longitudinal openings at its distal extremity. The boiler should have a thermometer affixed, and also be provided with a safety-valve. A wooden handle is attached to the catheter to permit of the surgeon handling it without burning his fingers. The water in the boiler having been brought to a boiling point, the lamp is momentarily removed, and the catheter rapidly introduced into the uterus, and the lamp again replaced. If this precaution be observed, the application is *absolutely painless*; whereas if the catheter is introduced whilst steam is issuing from it, severe pains are frequently complained of. The catheter should not remain in the uterus for longer than ½-1 minute, and the same precautions be observed on withdrawing it, i.e., to first remove the lamp from under the boiler. In all the cases, with the exception of the carcinoma, the uterus was first dilated by means of iodoform gauze or some special dilators.

On Ether Narcosis.—(P. Bruns, *Berl. kl. Wochenschrift*, 1894, No. 51, and *Centralblt. f. Gynec.*, 1895, No. 7.) The author contends that most cases of bronchitis and bronchopneumonia following the inhalation of ether are due to the nature and quality of the ether. He has established the fact that simple contact of air will cause a deterioration of the ether by the formation of certain products of oxydation which act as strong irritants of the respiratory mucous membrane. This accident may be avoided by keeping the ether in small bottles (of about 300 cms.) in a cool place, and opening a fresh bottle for each operation. Any ether that is left over is unfit for future purposes of inhalation, and can only be used externally. Such was the practice adopted in Bruns' Clinic with satisfactory results.

PROCEEDINGS OF BRANCHES.

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New South Wales, Dr. Crago, 34 College Street, Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE general meeting of the Branch was held at the Royal Society's Room, Sydney, on Friday, 31st May, 1895. Present: Dr. Jenkins (president), in the chair; Drs. Goode, William Chisholm, Cohen, Fieldstad, Gordon MacLeod, Angel Money, O'Hara, West, Clubbe, Huxtable, Crago, James MacLeod, R. Bowman, Tidswell, Dowdell, G. A. Marshall, Colpe, Gavin Morton, Martin, McKay, Kendall, Todd, Bennet, Macdonald Gill, O'Reilly, Lennhoff, Mullins, Faithfull, Worrall, Pockley, Armstrong, Charles Martin, Fiaschi, Maguire, J. A. Dick, Neill, Jamieson, Hughes, Scot Skirving, Dixon, Bucknell, Hall, Frizell, Knagges, Power, Schrader, Murray Will, Walton Smith, Flynn, Pentland.

Visitors: Drs. Lilie, formerly of Moree; Macdonald, Queensland; Haynes, of West Australia.

The minutes of the previous meeting were read and confirmed.

The hon. secretary announced that the following gentlemen had been nominated as candidates for membership:—Dr. Martin Doyle, Newcastle; Dr. Caruthers, Balmain; Dr. Bloch, Albury; Dr. W. C. Macdonald, Queensland; Dr. Flashman, Parramatta, Dr. McBurney, Queensland.

The President explained that such nominations would on this occasion and in future be dealt with at the council meeting next after the monthly meeting at which the nominations are announced.

Dr. GORDON MACLEOD exhibited a patient suffering from congenital malformation of the iris, with polycoria in the right eye, and explained the case.

Dr. ANGEL MONEY proposed "That no member of council hold office for more than three consecutive years."

Dr. POCKLEY seconded the resolution.

Dr. MULLINS moved as an amendment, "That the three members who shall have attended the council meetings least frequently during the preceding year shall be ineligible for re-election until after the lapse of one year. In case of equality the retirement shall be decided by drawing lots."

Dr. MORGAN MARTIN seconded the amendment.

Drs. Crago, Huxtable, Todd, Worrall, and the President spoke against both the resolution and amendment.

Drs. William Chisholm, Scot Skirving, Charles Martin spoke in favour of the resolution.

Dr. CLUBBE spoke in favour of the amendment. The amendment and resolutions were then put by the President, and both were negatived.

Dr. W. C. MACDONALD read a paper on some experiences of North Queensland snakes.

The President (Dr. Jenkins) congratulated Dr. Macdonald on his interesting, valuable and practical paper, and hoped it would appear in the pages of the *Australasian Medical Gazette*. We all were interested in the subject of "snakes;" we had much to learn; but we had learned something to-night. It was satisfactory to know that there was little danger in sucking a snake-bite, even when the mouth of the operator was sore, and that snakes could do little harm unless they get a good hold with the lower jaw. Dr. Macdonald's experience with strychnine as a remedy was not encouraging, and without doubt it was a dangerous remedy to place in the hands of the unskilled. In the *B. M. J.* for April 30, 1895, page 884, there was an interesting leading article on "Strychnine as an antidote to cobra poisoning." Various experiments had been carried on in a scientific manner by Surgeon-Lieutenant R. H. Elliot, and he was led to the conclusion that in animals poisoned by cobra virus "the subcutaneous injection of strychnine often hastened death markedly, whilst it never could be said materially to retard it." We were evidently at present to place our reliance on the old method of ligature, scarifying and suction.

Dr. SCHRADER said that when at Inverell he had had the experience of one case of snake-bite-poisoning, and had found the use of strychnine not successful.

Dr. STEWART MCKAY said that there was one point in Dr. Macdonald's paper that he was much interested in, and that was the statement that the death adder was an intermediate form between the venomous colubrine snakes and the vipers. In a monograph on the anatomy of the death adder that the speaker had published a few years ago he had proved that the death adder was really a venomous colubrine snake, although its outward appearance was very similar to that of a viper. It was not so much a mere classification point that was at stake as a pharmacological one; for, were it proved that we had a viper in this country, or a transitional form between the venomous colubrine snakes and the vipers, the bite from such a snake would, *a priori*, be more dangerous than if it belonged to the venomous colubrine class. The speaker would, therefore, like to know on what grounds Dr. Macdonald had formed his conclusion with reference to this point.

Dr. COLPE said he had had some little experience of snake-bite, and he had adopted the method of squeezing the wound and draining it as far as possible, instead of sucking it; after the wound had been squeezed the ligature was applied.

Dr. MACDONALD, in reply, said an answer to Dr. M'Kay's question with reference to the death adder being placed in the list between snakes and vipers was that the fangs of the death adder were dissimilar from either the venomous colubrine snake or true vipers. The fangs of the death adder were perforated, and permanently erect; not so with either vipers or Australian poisonous snakes. As to the statement that there were no snakes in Australia capable of killing a healthy man, he (Dr. Macdonald) could not agree with Dr. M'Kay, as he could produce such a snake. As a matter of fact, deaths had occurred from snake-bite, both with treatment and without treatment. He was glad to hear Dr. Martin's opinion of the use of the ligature, as he from practical experience knew the benefit of it.

There could be no question but that we must go back to the old methods of ligaturing, scarifying, and sucking in the treatment of snake-bite, instead of relying on the injection of strychnine. The question of the cause of immunity from certain disease had been causing him (Dr. Macdonald) some thought, and although he had not arrived at any very definite conclusion on the subject, he frequently wondered how it was that dogs in some cases had such an immunity from snake-bite, and it must arise, as in the case of tick-poisoning, from inoculation, of which he (Dr. Macdonald) hoped on some future occasion to give his opinion to the members of the Branch. He only now wished to thank the members for the patient hearing they had accorded him.

Dr. TODD said that he was engaged in the Dean case, and would be glad if any of the members present would give him any help to clear up certain points in this case.

NEW SOUTH WALES BRANCH.

A SPECIAL meeting of this Branch was, by permission of the President of the Sydney Hospital (the Hon. Sir Arthur Renwick, M.D.), held in the large theatre of the hospital on May 10th. The meeting was called to witness a demonstration by Dr. Bloch, of Albury, of Schleich's method of producing local anaesthesia by injection of saline fluids slightly medicated with morphine and cocaine, a full description of which will be found in Dr. Bloch's paper, published in this number.

The following were present:—Fred. W. Marshall, L. R. Huxtable, P. Sydney Jones, T. Chambers, Wm. Chisholm, W. J. Barkas, James Graham, George Armstrong, A. MacCormick, Jno. M. Creed, Sydney Jamieson, J. M. Gill, J. Flynn, J. Parker, P. J. Collins, G. A. Marshall, James Macky, A. H. Fieldstad, T. Morgan Martin, D. Gwynne-Hughes, Walter Spencer, Wm. H. Crago, L. F. Bucknell, William T. Chenhall, George T. Hankins, Robert H. Todd, Stanley C. Jamieson, Leslie Hollis, John M. M'Donagh, Arthur F. Parker, Geo. Sutherland, W. R. Clay, Sydney C. Watkins, Fred. J. T. Sawkins, Dr. Devlin, A. Jarvie Hood, W. Camac Wilkinson, F. Antill Pockley, C. Seymour Dowdell, Robert T. Paton, Algernon A. Cohen, G. H. Abbott, Philip E. Muskett, A. Hugh Kendall, S. H. Schrader, Thomas S. Kirkland, Ed. Harold Binney, G. F. Rutter, W. Edward Warren, H. G. A. Wright, Alexander Philip, Chr. F. Eichler, James Kingsbury, James A. Dick, David D. Rutledge, A. Murray Will, A. M. Johnson, Thane Langhorne, M. J. Lyden, W. Gordon Smith, Thomas Harrison, R. Fairfax Reading, Richard Arthur, Leo. C. F. Neill, Thomas Dixon, H. Walton Smith, P. Dean Bray, E. J. S. Spark, E. J. Jenkins, H. Stuart, R. S. Bowker.

In the absence of the President of the Branch, Dr. Sydney Jones, the Vice-president, introduced Dr. Bloch.

Two cases were selected for the purposes of the demonstration, and the first, a case of excision of varix in the calf, was, after injection by Dr. Bloch, operated on by Dr. Fiaschi.

The second case, removal of a fatty tumour from the right shoulder, was, after similar preparation, operated upon by Dr. MacCormick.

The demonstration was witnessed by the large audience with great interest, and was generally regarded as being completely successful.

A hearty vote of thanks was at the close of the proceedings accorded to Dr. Bloch.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting of this branch was held in the Austral Salon, Melbourne, on Wednesday, 29th May, at 8 p.m. Present—The President (Dr. Snowball) in the chair, Drs. McAdam, Morrison, Harbinson, Meyer, Hamilton, Dyring, Cuscaden, Hooper, Springthorpe, Noyes, Kent-Hughes, Syme, Steell, and Henry. The minutes of the previous meeting were read and confirmed.

A letter was read from the Secretarial Committee of the Civil Rights Defence Committee, London, conveying the very cordial thanks of the committee for the Branch's expression of sympathy and approval, and for the vote of funds to the Anderson Appeal Fund.

The President declared the following elected members of the Branch:—S. V. Theed, M.B.C.S., L.R.C.P., Warrnambool; T. F. Ryan, M.B., B.S. Melb., Kaniva; C. G. Fitzgerald, L.K.Q.C.P.I., Seymour; A. G. Salter, M.B., B.S. Melb., Women's Hospital; W. Moir, M.B., Ch.M. Ed., Morwell; T. A. Wilson, M.B., B.S. Melb., Creswick Hospital.

EXHIBITS.

1. Dr. McAdam exhibited his patient suffering from epidermis hypertrophica. Dr. McAdam said:—

A CURIOUS SKIN AFFECTION.

By R. L. McADAM, B.A., M.D., Ch.B.

A CURIOUS skin affection, which, for want of a better name, I have ventured to call *epidermis hypertrophica*, is presented by the patient whom I show to-night. I shall briefly describe the present appearances, and then give the history.

On the right heel is a large mass of epidermal tissue roughly resembling the partly-worn-down heel of a boot. The mass measures $1\frac{1}{2}$ inches by 2 inches, and is nearly an inch deep. In colour it resembles beeswax, and all over its surface it has plainly been whittled away from time to time. Islets of similar tissue of smaller size and less depth are dotted over the anterior plantar surface; thus, there is a boss in the centre of the ball of the foot, another on the ball of the great toe, and yet others on the lateral surfaces at the bases of the great and little toes respectively. On the dorsal aspect there are three ordinary corns on the toes.

The left foot presents very similar appearances, but they are not so well marked.

Now as to the hands. The affection is limited to the palmar aspects. In the right hand, from just below the ulna to the base of the little finger, is a rough, horny ridge of thickened epidermis. This is continued across the bases of the fingers, and then spreads upward on to the flexor aspect of the forefinger. There is also a similar ridge

extending from the base of the thumb up to the root of the forefinger.

The left hand is not so severely affected as the right, and the hypertrophic epidermis does not occur on the forefingers, but is well marked on the little finger instead.

The strangest thing about the hands, however, is the fact that the flexor tendons are all more or less contracted, and that the fingers are impossible of extension even by using a fair amount of force. The right forefinger and the left little finger are particularly badly contracted. The whole hand resembles the *main en griffe*.

The finger nails are concave from side to side, curled up at the tips, and unhealthy and lustreless in appearance. The hair on the head is plentiful, and of fair length, but it is dry and peculiar in hue and texture, resembling tow more than anything else. The patient has continually to keep paring down the epidermal bosses in the soles and heels. The organs are sound. I elicited the following history from her mother and herself:—

A. H., single, aged 42, family history not noteworthy; has had no illness, except as mentioned below. The patient and her mother attribute the malady from which she now suffers to the effect of vaccination. It appears that the operation took place at Manchester, when she was eleven months old. Up till that time the mother says she was an exceptionally healthy child. She describes the vaccinated arm as having been extremely sore and swollen. Within a week or two after vaccination the eyes became affected with what appears to have been a purulent conjunctivitis. Vulvitis also occurred; while the hair gradually fell out, leaving the head at length perfectly bald. The eyes continued troublesome until she was two and a-half years old. They then improved. At this time began the affection in the feet, which has persisted up to the present.

Menstruation first occurred when the patient was 17. The vulvitis, which had continued to trouble her for 16 years, lessened at that time, but so gradual was its disappearance that it was not until she reached the age of 27 that she finally lost it. At this time, too, it happened that the hands first became affected, the thumbs being the places in which the disease originated. From thence it gradually advanced until the condition seen now was reached. It was not until the affection had been in existence some five years in the hands that the fingers began to contract.

Both right hand and foot are described as painful; the same is true of the left hand and foot, but in a less degree. So painful are the

patient's feet that she has to ease them by kneeling while at her work of ordinary household duty. The pain gets worse coincidentally with menstruation. The hair only re-commenced its growth when she reached the age of 27.

It is stated that treatment of all kinds was tried unavailingly for her relief until she was eleven years old. Since that time nothing has been done until now.

2. Dr. Dyring exhibited a patient suffering from a peculiar and localised oedema.

DR. DYRING read the following notes :—

J. B., *æt.* 43, now a wood-carter, formerly a quarryman; has always been a hard manual labourer. Five years ago had similar symptoms, which cleared up after a few days. At that time symptoms arose, shortly after an accident which fractured three ribs on the left side. Fracture of ribs was then followed by a sharp attack of pleurisy, which did not become effusive. Of the family history, the only point of note is that a brother died of acute pulmonary phthisis. Six weeks ago noticed pains in the stomach (? epigastrium); pain along the back of the leg (sciatic nerve); pain in small of back (lumbar nerves); also pain in tip of shoulder blades. He then noticed a swelling of the abdomen come on gradually; it involved the abdomen and back, and was limited by the pubic bones and epigastrium at first; it has reached the nipple line on this attack, but did not get above the epigastrium on the first attack. Three weeks after he noticed the swelling I saw him. He was visibly suffering from dyspnoea. On removing his clothes, there was a localised oedema and thickening of the abdominal walls. It was limited by the pubes and the epigastrium; for a fortnight it pitted on pressure. There was nothing abnormal in the heart or kidneys. The heart's action was mechanically impeded by the swelling. The liver dullness was not increased. There was pain on pressure in the epigastrium. On either side of the epigastrium there were two swellings which could be distinctly caught between the fingers. The patient otherwise looked well, but was soon "out of breath" on the slightest exertion. There was an indistinct history of an influenzal attack before the present symptoms intervened. On exhibition at the Victorian Branch of the B. M. A., the swellings on either side of the umbilicus were adjudged to be lipomata. On examination the day after, they had entirely disappeared. The case appears to be an obscure nerve-result of influenza, producing a localised oedema and increase of the abdominal cellular tissue.

Both cases were of considerable interest, and were carefully examined by members present.

3. Dr. Springthorpe showed a number of small gallstones passed by a patient, and a couple of unusually large ones found *post-mortem* in the gall bladder, and not giving rise to any symptoms. He also brought under the notice of members a printed wall-sheet on consumption, which he had prepared for the Australian Health Society, and which, after approval by the council of that society, had been included amongst their publications. He considered the matter one of very great importance, and remarked how exceptional it still was to find medical men giving their patients instructions how to deal with infected sputum.

DR. MEYER then read his paper, entitled "Notes on Six Recent Cases of Abdominal Section."

SIX RECENT CONSECUTIVE CASES OF ABDOMINAL SECTION.

By FELIX MEYER, M.B., B.S., HONORARY SURGEON WOMEN'S HOSPITAL, MELBOURNE.

THESE cases are, I think, worthy of a brief notice for the Branch, because they involve some points of interest as regards diagnosis and treatment. Four occurred in private, two in hospital practice, and all have recovered.

CASE 1 was that of a young woman aged 32, three years married, never pregnant. She was of sallow complexion and highly nervous temperament. Her chief symptoms were more or less constant sacral pain, and acutely painful, but not excessive, menstruation. I first examined her in February, 1894, and diagnosed a hard, apparently simple, uterine fibro-myoma, about the size of an ordinary mandarin orange. I believed it to be attached to the uterus by a short, thick pedicle, and advised abdominal section. She, however, returned to her home in another colony. Coming back to me in February of this year, I made a second examination. The tumour had increased to the size of a large orange, and was more intimately connected with the uterus.

On the 13th March I cut down on the tumour, Dr. O'Sullivan and Dr. Lynch assisting. The growth was a hard, uniformly-rounded fibro-myoma, broadly sessile to the uterus. I performed salpingo-oophorectomy. The ovary on the right side was enlarged, and its capsule thickened; that on the left was adherent to the tumour, deep down, and this, with its short tube, made it a little difficult to deal with. I left in a glass tube, which drained free, bright, oozing for a few days, after which I substituted an indiarubber tube. She was very hysterical all through her convalescence, which was slow. She is now well, and the tumour is much diminished. I have attended three of her sisters in confinements; they have all large families.

CASE 2.—On the 16th March I saw, in consultation with Dr. Woinarski, of North Melbourne, a lady of 38, suffering with pelvic peritonitis. The cause was obscure, but there was a history of two similar attacks (she used the word peritonitis) a few years back. She was now married eight months for the second time, having been a widow ten years. She had never been pregnant. When I saw her with Dr. Woinarski, pain chiefly over the right iliac region; tympany and general febrile disturbance were the main symptoms. The uterus was apparently fixed, and the posterior vaginal fornix was blocked by a hard, tender mass, which extended into Douglas' space.

On the 18th and 19th, late at night, I saw her again with Dr. Woinarski; her symptoms were alarming. A thin, thready, extremely rapid pulse; temperature, 104° ; with a hard, ill-defined prominence in the right iliac region. No fluctuation was detected. The patient was practically dying, so, on the following day, I performed an abdominal section, Dr. Woinarski and Dr. Lynch assisting. The abdominal walls were enormously fat. There was extensive peritonitis, much recent lymph, which, on the right side, had matted together the uterus and the ovary and tube, giving rise to the hard mass felt externally. There was no pus cavity. I separated as many of the parts as I dared, especially the adherent intestines, causing some slight hæmorrhage; carefully sponged out the abdominal cavity, and left in a glass drainage-tube, which drained freely for a few days, after which I replaced it by indiarubber tubing, and finally by iodized lint. She made a splendid recovery, and is keeping well.

CASE 3 was that of a healthy, well-nourished woman of 32, married 15 years. She had had six children, the last $2\frac{1}{2}$ years of age. There was no history of ill-health or of disturbed menstruation. The abdomen was distended, with a large semi-fluctuant tumour reaching from the pelvis to within two inches of the ensiform cartilage. She estimated its growth roughly at eight months.

I performed abdominal section at the Women's Hospital on the 4th April last, coming on a large unilocular cyst of the left ovary, with a very broad pedicle.

On tapping the cyst, a small quantity (two or three ounces) of the black viscid fluid contents escaped into the abdominal cavity. The right ovary, being cystic, was also removed. I carefully sponged the abdominal cavity, which I closed, without flushing or the use of a drainage-tube.

She made an uninterrupted recovery, and left the hospital 26 days after the operation.

CASE 4.—On the 7th August last year I curetted a lady (aged 32, married three years) for simple hypertrophic endometritis, uncomplicated with any tubal or ovarian inflammation, but suffering with excessive and painful menstruation. She regained her health, and became pregnant for the first time early in the following November. Her progress was satisfactory till the 15th January of this year, when she began to feel some dragging in the rectum. Examination showed a slightly enlarged pregnant retroverted uterus. This was easily pushed forwards with the finger. A glycerine-cushioned Greenhalgh pessary was introduced, which gave great comfort. She was kept at rest for some days,

and, the pessary being shortly after removed, she felt free of pain. On the 3rd of April Dr. Thomson, of Essendon, was called to see her urgently at night, for acute pain in the right iliac region. He relieved this with sedatives, and telephoned me that he had found a hard swelling on the right iliac fossa. On seeing her I found this to be the case: We were neither of us sure that this was uterine or not; it certainly gave the impression of being separate. The uterine tumour was about the size of a seven months' pregnancy. The symptoms became somewhat alarming within the next two days, the pains growing very acute over the site of the iliac growth, yielding very slightly to very large doses of sedatives, the pulse going to 140, and the temperature to 102.5° F. Having decided to do abdominal section, I did so on the 5th April, Dr. Charles Ryan and Dr. Thomson assisting, and found a pregnant fibroid uterus, a hard boss at the right cornu constituting the painful tumour discovered by Dr. Thomson. I simply closed the wound. The pain ceased, but the tension of the abdomen and the violent movements of the fœtus caused some separation of the edges of the wound at its most superficial part. The patient has, however, made a good recovery, and there is every hope of her going to term in August.

CASE 5 was that of a lady aged 31, who had had one child, 10 years ago, with a history of two attacks of pelvic inflammation within the last twelve months, and now suffering with more or less constant back pain. She was a patient of Dr. Springthorpe, who had diagnosed an abdominal tumour. There was an abdominal central enlargement, with a sense of fluctuation; the abdominal walls were very thick, but a distinct cyst wall could be made out.

On the 24th April I made an abdominal section, Drs. Springthorpe and Inglis assisting. The cyst wall was adherent to peritoneum; on inserting the trochar, about a quart of clear fluid, with a slightly greenish tinge, came away. The cyst was now found to be intimately adherent to the mesentery and intestine in many places. Springing from the fold of the right broad ligament, it had extended downwards into Douglas' space, latterly to the pelvic right wall, and was closely adherent to the meso-colon. After trying for more than half-an-hour to separate it from its numerous attachments, I deemed it unsafe to try and remove it entire. I opened it at the top, slit it down with scissors so as to make of it a flat, ribbon-like pedicle, which I brought outside the abdominal wound at its lowest angle. I closed the cavity, and left in a glass drainage-tube. For the next 36 hours the patient vomited

almost without intermission, and I feared collapse. After this she made an excellent recovery; the extra-abdominal stump coming away within a fortnight. I saw her in her house last Sunday (26th), going about her ordinary duties, and declaring that she felt perfectly well.

CASE 6 was that of a total extirpation of the uterus for a submucous fibroid. I was called by Dr. Dowling, of Richmond, to see the patient at her home some seven weeks previously. She was 36, had had three children, and no miscarriages. Up to fifteen months ago she had been in good health, but now her menses became more frequent and abundant, the flow lasting seven to fourteen days, with clots. Eleven months ago she noticed a hard lump in her abdomen over the site of the uterus. This continually increased, giving her the idea she was pregnant, till it reached now above the navel. When I saw her she was very anæmic, thin, and weak. The abdomen showed a hard, solid tumour, reaching out of the pelvis up to two inches above the umbilicus. The os was found dilated to the size of half-a-crown, a hard tumour presenting, and the cervix was expanded, allowing the finger to be passed up round the tumour for a distance of nearly two inches.

On the 9th May, assisted by the hon. surgical staff of the Women's Hospital, I did a complete abdominal hysterectomy, the operation lasting about an hour and a-half, the freeing of the tumour from its peritoneal attachments requiring a great deal of care. There was no hæmorrhage. The vagina was packed with iodoform gauze through the opening in its roof, and all the separated portions of the pelvic peritoneum were sutured with fine silk. The abdominal cavity was well flushed with saline solution (half-a-drachm to the pint of water), the abdominal incision was closed with silk-worm gut and horsehair sutures, and a glass tube left in. The latter was removed three days after, and the vaginal pack four days after that. The patient, who is expected to leave the hospital by the end of the week, is making a good recovery, and has never given a moment's anxiety.

The tumour before you is submucous fibromyoma. On the fundus are three subperitoneal fibroids about the size of plums. It has dilated the uterus to the size of a five to six months gravid uterus.

As I remarked at the beginning, these cases have not been brought before you on account of their consecutive success, but because of points of interest—if not actual difficulty—in diagnosis and treatment. Thus, in case 1, various opinions of medical men of experience were given more or less at variance, viz.—“a tumour of the

uterus,” “a tumour quite independent of the uterus, which moves freely,” and “a hard tumour of the ovary.” Lawson Tait has pointed out how almost impossible it is to say what is the exact condition of things until the section is made.

In case 2 I anticipated finding a pus cavity; but found none. The “relief of tension” afforded by abdominal section in this case must have a very wide physiological significance. I cannot think that the mere section, without the removal of free lymph and the separation of recent adhesions, would have been followed by such happy results.

Case 3 is a plea in favour of avoiding unnecessary flushing of the abdomen in this class of operation. The thick, dark fluid which escaped (blood undergoing changes, not in any way septic) did no harm. Careful sponging, I venture to think, in many cases is preferable to general lavage, which often distributes the harmful matter to otherwise unreachable parts.

In case 4 I really thought I was dealing with a growth separate from the uterus. Certainly the acute pain and febrile symptoms ceased after the operation. It is quite possible that she may be delivered at full term without excessive hæmorrhage, or the necessity of a Porro, for which, nevertheless, I shall be prepared. It is also probable that the myoma will undergo fatty degeneration along with the involution of the uterus generally.

Case 5, though somewhat unsatisfactory, left me no alternative, and I should do much the same again under similar circumstances.

Case 6 affords a good comparison with case 1, the latter involving the simplest and safest method of dealing with a slowly-growing, hard fibro-myoma in a young woman, while this case demonstrates the extremest application of hysterectomy, which, as time goes on, will, I think, replace both the intra and extra peritoneal method.

Dr. HOOPER congratulated Dr. Meyer on his well-deserved success. Lawson Tait's dictum about exploratory operations—“cut and see”—had led to many unnecessary operations. As a rule lavage gave better results than the dry toilette, and he would not have liked to do as Dr. Meyer did in his case of rupture. Did not Dr. Meyer anticipate further trouble in his case of myoma with pregnancy? Twice he had had to operate later on.

Dr. M'ADAM was specially struck with the unexplained relief afforded by operation in the last case.

Dr. SPRINGTHORPE could congratulate Dr. Meyer upon his success with their conjoint case. It had been a surprise to him that such a large cyst had remained months under medical treatment without its presence having been noticed. He quoted cases where the diagnosis had been settled by exploratory operation, and one (? duodenal ulcer) where operation had left it un-

settled. As instances of the difficulty in diagnosing abdominal lesions, even apart from the uterus, he mentioned cases of appendicitis which had been considered hepatic abscess, left pyo-salpinx, and typhoid fever.

Dr. SYME considered Dr. Meyer had shown excellent judgment. No doubt some used Tait's dictum as a cloak for ignorance and laziness; but, as Tait meant it confirmatory rather than exploratory, it was often thoroughly justifiable. He could find no definite rule as to what to do with fibro-myomata complicated with pregnancy. One such case with him had gone to full term. With Dr. Meyer, he would not use lavage if he could avoid it. There was a risk of washing foreign bodies into dependent parts and among the intestines, whence they were very difficult to dislodge. All depended upon the case, and he believed more liberties might be taken where the peritoneum was not perfectly healthy, and that one should do as little as possible, especially where the intestines were concerned.

The PRESIDENT agreed that sponging was frequently preferable to lavage.

Dr. KENT-HUGHES would like to know had such operations put an end to pain?

Dr. MEYER, in reply, thanked members for their criticism. Tait's dictum was not likely to be abused by the right men. His first case showed its value. He would watch his case of fibro-myoma complicated with pregnancy. He expected a natural labour, with some hemorrhage, but would be ready for forceps, and even a Porro, if necessary. He did not pretend to explain the relief after operation in some cases. He could not say why his last case got better. He had twice noticed curettage not only bring about pregnancy, but followed by a fibroid. Was there any causal relationship? He would be sorry to quote his dry toilette as a standard line of treatment. Of course pus could never be so treated, but it certainly was not wise to flush out every case indiscriminately. Each case must be treated on its merits.

The meeting then adjourned.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY meeting held at the Adelaide Hospital on 30th May, 1895. Present—The President, Drs. T. K. Hamilton, Poulton, Giles, London, J. A. G. Hamilton, Verco, Way, Corbin, Jay, Parks, Hayward, Clindening, Cudmore, Goode, Hone, Irwin, Gaulb, Teichelmann, Fischer, Marten, A. A. Hamilton, Michie, Stewart, and hon. sec. (H. Swift).

A very interesting and instructive evening was passed, and many present expressed their hopes that it would be repeated on an early future occasion.

LIVING EXHIBIT.

Dr. HUMPHREY MARTEN showed a man suffering from actinomycosis hominis of the left thigh. The history of the case had been read before the Society in October, 1894. The fungus still continues to grow in various parts of the thigh, and the only treatment that seems to be of any use is to incise the oedematous swellings, and scrape out their contents. The patient remains in fairly good health, and it is now just a year since the disease first made its appearance.

Dr. T. K. HAMILTON exhibited a case of *adenomyxo-sarcoma of the lachrymal gland*.

Mrs. A., aged 43 years, came under treatment on November 26, 1894. She stated she first noticed some enlargement over the right eye about two years ago, and lately the eye had become very weak and irritable. On examination, the eyeball was found very much proptosed, being pushed downwards and somewhat inwards; the movements were limited in all directions, especially outwards; the sight was intact, the pupil acted normally, tension +? and beyond slight blurring of the margins of the disc nothing abnormal was discovered with the ophthalmoscope. There was no actual pain, but a feeling of soreness in the eye. There was no deficiency, but rather an increase of the lachrymal secretion. The lachrymal gland, enormously enlarged, could be distinctly felt under the edge of the orbit. An exploratory aspiration failing to get any fluid, the tumour was cut down upon by an incision just below the orbital arch to the outer side of the branches of the ophthalmic division of the fifth nerve. The superficial portion of the growth was found to be encapsuled, and easily removable from its surroundings, but the deeper portions, evidently having broken through such limitations, had extended backwards as far as the optic foramen, enveloping the nerve on all sides. This loose mass was thoroughly removed with the curette and finger, and the whole when removed was the size of a small hen-egg. A drain was left in, and the edges of the wound brought together. Beyond slight chemosis there was no reaction after the operation. The condition now, six months afterwards, is very satisfactory. The skin wound is scarcely perceptible; there is no trace of any growth to be felt under the orbital arch. There is still some proptosis, due probably to infiltration of the retro-ocular tissues, but the movements of the eye are perfect; no ptosis, the vision, tension, and ophthalmoscopic appearances normal, and there is no dryness of the globe. Dr. Teichelmann has kindly examined a section of the growth for me, and reports as follows:—The tumour is an adenomyxo-sarcoma, similar in structure to growths sometimes found in the parotid, which gland is histologically the same as the lachrymal. Dianoux has lately published some cases of tumours of the lachrymal gland (*Annales d'Oculistique*, August, 1894), and in his report emphasises the importance of early operative interference, so as to remove the tumour before it has spread beyond the limits of the gland itself; but, as the growth of these tumours is usually very slow, they are rarely seen in the very early stages. In this case the growth was so gradual that the patient did not seek advice until it had assumed large proportions, and had broken through the gland structures into the adjacent tissues. A point of some interest in the case is that neither the enormous enlargement of the gland, involving probably complete suspension of the lachrymal function, nor its subsequent removal, seems to have interfered with the necessary supply of moisture to the eye. It would seem, as Berry points out, that other secretions from the lids suffice for the purpose. The comparative rarity of lachrymal tumours, and the favourable result of the operation, make this case worthy of being placed on record.

Dr. POULTON showed three women who had been operated upon for lumbar and psoas abscess, with good recovery in each instance. Also an example of Thiersch's skin-grafting, applied to an old rodent ulcer of the nose and face—ulceration of twenty years' standing, destruction of one side of nose, eradication of the ulcer, successful grafting; and a man who had five months back sustained fracture of the pelvis, with laceration of bladder and urethra, and extravasation of urine. A plastic operation had restored his urethra and perineum;

normal micturition was regained, and the man could walk without help. He had been run over by a bullock dray.

Dr. ANSTAY GILES exhibited the following cases, which have been operated upon by him in the Adelaide Hospital :—

1. A man, *æt.* 45.—Gritti modification of Carden's amputation performed three months ago for large osteosarcoma growing from the tibia and fibula. An excellent stump resulted.

2. A female, *æt.* 33.—Similar operation performed six weeks ago with an equally satisfactory result.

3. A lad, *æt.* 16.—Admitted into Adelaide Hospital ten months ago; had been treated outside for three months for acute rheumatism; the right shoulder joint and upper arm greatly swollen, and fluctuation was distinct. An immediate operation was performed, a large quantity of pus evacuated, and the upper half of the shaft of the humerus, which was completely necrosed, was removed. The shoulder joint was not involved. The arm now is as strong as ever, and its usefulness not in any way impaired. Doubtless, this was a case of acute epiphysitis in the first instance, due to a slight injury which was most likely overlooked in the earlier stages of the treatment, followed by acute necrosis of the upper half of the shaft of the bone.

4. A child, *æt.* 12, whose hip joint was excised nine months ago for extensive disease in the head of the femur and acetabulum. Large abscesses had formed around the joint. The patient can now walk about actively without any support, all sinuses have completely healed, and the muscles of the thigh appear to have regained their normal strength and development.

5. A man, *æt.* 30, who suffered from a dislocated hip joint for five months before any proper attempt was made to reduce it. Then, as reduction was impossible, the head of the femur was removed. Complete ankylosis resulted, and for the last eighteen months the man has engaged in hard manual labour, and can walk without inconvenience.

Dr. LONDON showed—

1. A case of sacral spina bifida.

2. A girl, aged four years, upon whom he had operated for double congenital inguinal hernia, with good results.

Dr. HAYWARD exhibited the following cases :—

1. A boy, aged four years, who from his birth had suffered from "chronic intestinal obstruction." The bowels were moved about once a month, at which times the abdominal obstruction was very great, the patient's suffering very severe. There was evidence of immense dilatation of, presumably, the colon.

2. A youth, aged 16, suffering from "acute anterior poliomyelitis," which had resulted in paralysis of the upper and lower extremities and muscles of the trunk. Gradual improvement was taking place in all the affected muscles except those of the left leg.

3. A woman, aged 34, suffering from chronic anterior poliomyelitis. There was almost complete paralysis of the lower extremities. No signs of improvement had yet been manifested.

Dr. SWIFT showed a boy with a contracted and keloid condition of cicatrix involving the external meatus of ear. His father had poured strong sulphuric acid into ear instead of Friar's balsam. Several operations had been performed, including the transplantation of a large skin flap. The boy still had to wear a tube to keep meatus patent.

Dr. SWIFT also showed a man who had been suffering from psoriasis, and who had been treated with thyroid tabloids. The improvement was most marked from the

very first. Dr. Swift had treated him for three or four previous attacks, but on no occasion had the improvement been so rapid.

Dr. J. C. VERCO showed a man with deep cicatrices after frontal herpes.

Dr. SWIFT (for Dr. Todd) showed a man with multiple lipomata.

PATHOLOGICAL SPECIMENS.

Dr. LONDON showed—(1) Two morphia suppositories passed by a patient after having been in the rectum for twelve and six hours respectively, without being in the slightest degree altered. The chemist stated that he had made them up with stearine instead of cacao butter, on the faith of a statement in "Squire's Companion to the B. P.," that the former is preferable. Had he read a little further he would have found that, whereas some kinds of stearine solidify at 78° F., others solidify at 120° F. The suppositories succeeded in arresting the diarrhoea for which they were given. (2) The half of an enlarged thyroid gland, removed by operation.

Dr. J. A. G. HAMILTON showed—(1) An inverted uterus, taken from a woman who had died in the Destitute Asylum. The midwife stated she applied abdominal pressure, and as the placenta did not come away after three-quarters of an hour's pressure she made gentle traction on the cord. The placenta was adherent. The patient was moribund when medical assistance arrived. (2) A fibro-lipoma or elephantiasis of vulva. Photographs of the tumour in situ were shown. (3) The appendages, removed for pyosalpinx, of a patient who had been treated some months previously for gonorrhoea. (4) Ovarian cyst. (5) Double hæmato-salpinx; the history pointing to a possibility of an old, ruptured, extra uterine gestation. (6) Dermoid cyst communicating with bladder and rectum. (7) Uterine fibroid, weighing 3 lbs., was removed by supra-vaginal hysterectomy on May 2nd; patient has done well.

The PRESIDENT showed—(1) Skull of a cow, showing a honeycombed condition of bones of face (lumpy jaw) due to actinomycosis. (2) Portion of lung of an Indian buffalo affected with actinomycosis. (3) Skull of a camel in which the nasal cavities are completely filled with spongy bone due to a sarcoma of the ethmoid bone. (4) Skull of an old bullock, with hoop-horns, which, from the unusual direction of their growth, have pierced the bones of the face and entered the nasal cavities, and come in contact at the nasal septum. (5) Bony fusion of all the dorsal and lumbar vertebrae, which form a solid rod of bone; from an Arab mare *æt.* 36. (6) Abnormal growth of a horse's hoof. It is eighteen inches long; remnants of iron nails are still recognizable in the margin of the hoof wall, and show that either from too long a retention of the shoe the hoof has not been worn away, or else that the animal became footsore after casting a shoe, and was abandoned far from the haunts of man, in which case the inordinate growth would probably be due to overproduction from irritation of the hoof-producing zone. (7) Calcifying myomata of an adherent and retroflexed uterus. The anatomical relation of the ovaries and tubes is so hopelessly confused that any relief by surgical means was impossible. (8) Follicular ulceration of thickened intestine (small and large) from a woman who suffered from chronic diarrhoea, and died of gangrene of left lung. (9) Heart of an old man who died of suppurative cerebro-spinal meningitis, &c. The auricular surface of mitral valve carries a polypoid thrombus, which has softened in the centre and discharged its contents into the systemic circulation. (10) Left kidney of an old man. The lower portion is

transformed into a thin-walled cyst containing clear fluid. It is the size of a cricket ball, and simulated a hydatid cyst. (11) Cartilaginous substitution of a patch of myocardium, including a papillary muscle of left ventricle, from an old man who had a similar patch in his left testicle and a syphilitic history.

The following paper was read at the last meeting of the Branch:—

FACIAL CARBUNCLE.

By W. A. VERCO, M.B.

ON September 24th, 1894, was called to see Wm. G., *et. 19* years, who works in a tinsmith's shop. Patient feels tired, appetite poor, and has a small swelling on right side of raphe of upper lip. The swelling is more or less lengthened, and seems to extend slightly downwards and outwards. Not very painful or tender. It had a slight white head, which was pricked, allowing a little bead of white pus to escape. T. normal, P. 10.

25th.—Swelling about the same, but has another head, which was pricked, and small core came away.

26th.—Swelling still there, and about the same size, but patient feels much better.

27th.—During the night swelling has extended outwards; lip much swollen; bluish-red, and very painful. In the evening the lump was larger, and little matter collected in the apex. Slight incision was made, but very little came away, though lip easier. T. 98·8°, P. 100. No appetite.

28th.—Was delirious during the night; swelling has extended downwards and outwards to the angle of mouth; looks very red and angry; pain very severe, and radiating all over the face and neck; scarcely any discharge from incision. T. was 100·2°, and P. 108. The same evening the temperature was 102·4°, P. 130, and patient quite delirious. During the day the swelling had extended on to the right cheek, and up to inner angle of right eye.

29th.—Dr. Verco saw the patient, and, having given ether, the swelling was opened on a grooved director, following the swelling to angle of mouth and then upwards to the inner canthus of the eye, and also on to the cheek. All the diseased and dead tissue was then scraped away with a sharp spoon, the wound irrigated, and then painted with pure carbolic acid. The inflammatory tissue was very hard, and there was very little matter. There was little bleeding, considering the extent of the incisions, the blood-vessels seeming to be occluded by thrombi. The wound was first dressed with antiseptic cold dressings, and afterwards with bread poultices. In the evening the patient felt much relieved;

T. 99·4°, and pulse 96. Swelling had not extended; was not delirious.

30th.—During the day there was a slight extension up towards the inner canthus. T. 99° morning, and 100·2° in the evening, P. 80 and 96. Felt very much better.

October 1st.—Had a good night; T. 98·4°, P. 80.; swelling diminishing; redness subsiding; scarcely any pain; very little discharge.

2nd.—Patient doing well. From this time the patient progressed nicely. The incisions healed satisfactorily, so that by the 16th there was very little disfigurement of the face, and patient felt able to go to work again.

I bring this case before you, gentlemen, to add one more success to the comparatively recent mode of treating these exceedingly fatal cases of facial carbuncle, of which Sir James Paget says he only had one recovery in fifteen cases.

The patient was thin, pale, and not by any means robust, and the case occurred in a young adult male, as most of the severe and fatal cases do.

There seem to be three chief modes of treatment in these cases:—

1. Expectant: as by plaisters, ointments and poultices, with tonics, as quinine and iron.
2. Destruction: as (a) by chemical agents, as caustic potash. (b) by physical agent, as by the actual cautery in the early stages.
3. Removal: (a) in early stages, extirpation of the carbuncle and healthy tissue around it. (b) incision and scraping.

The expectant treatment in these cases of severe facial carbuncle should, I think, be of short duration. Directly the swelling commences to spread with that angry, reddish-purple appearance, it is better to resort to methods of destruction and removal of the offending "materies morbi." For, if we leave it, we never know how soon the poison generated by the decomposing and sloughing tissue may be carried by the lymphatics or by the inflammatory plugs in the veins either into the general circulation, with the resulting pyæmia, or into the circulation of the brain, with the accompanying phlebitis and abscess.

With operative treatment, the patient has a very fair chance of keeping his life; without it, a very probable chance of adding to the already high mortality of these cases. Of the operative measures, the choice, I think, lies between the actual cautery and incision with scraping. Rushton Parker advocates the removal of the whole mass by knife and sharp spoon, and dressing with cyanide gauze. But even more satisfactory than this is, I think, the method advocated by Mr. Teale, of Leeds, in a paper on

"Scraping in Surgery," in the *Liverpool Medico-Chirurgical Journal*. Mr. Teale advocates "a central crucial incision of moderate size, with vigorous scraping in every direction in which the scraper can penetrate into the half-dead tissue. If necessary, this main attack should be supplemented by smaller crucial incisions and scrapings in the contiguous carbuncular skin, if it look oedematous and infiltrated by the spreading poison, and already half-condemned to a destructive career. Having rid the mass, as far as possible, of all diseased, decaying, infective material, the resulting cavities and crevices should be well soaked with pure carbolic acid, carefully used, so as not to scald the skin, so that every crevice where the half-dead tissue remains may be soaked and penetrated. Finally, the raw surface is well charged with iodoform, and dressed with some antiseptic absorbent material. The result is cessation of pain and feverishness, restoration of the normal temperature, and a rapid establishment of comfort, convalescence and healing."

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL SOCIETY OF QUEENSLAND.

THE 101st meeting of the Society was held on May 14th, 1895, in the Society's rooms. Present—Dr. Hill (President), Drs. Gibson, Orr, Love, Culpin, Booth, Smith, Lillian Cooper, Fullerton, Freshney, Lawes, and Turner.

Dr. Gibson showed a case in which the lens had been dislocated forwards as the result of a blow. Although the displacement had caused 3.5 diopters of myopia in a previously slightly hypermetropic eye, the power of accommodation was retained. The lens had not become opaque, although four months had elapsed.

Dr. Turner exhibited a series of recently-made pure cultures of the following organisms:—*Bacillus anthracis*, *subtilis*, *megatherium*, *mesentericus*, *typhi*, *coli commune*, *diphtheriæ*, *tetani*, *prodigiosus*, *indicus*, *pyocyaneus*, *fluorescens*; the bacillus of *schweinerotlauf* and of blue milk; *vibrio Finkler-Prior*; *micrococcus agilis*, *tetragonus*; *sarcina aurantiaca*, *flava*, *lutea*; *saccharomyces rosea*. Also a glycerine-agar plate culture from diphtheritic membrane.

Dr. Lawes showed splinters of tibia from a case of axe-wound.

Minutes of last meeting were read and confirmed.

Dr. Gibson moved that Dr. Turner be elected hon. secretary for the remainder of the year, vice Dr. Hardie, resigned. The motion was seconded by Dr. Smith, and carried unanimously.

After some discussion with regard to the financial affairs of the Society, the President called on Dr. Fullerton to read his paper on "A Case of Abdominal Tumour in a Woman," which shall appear in our next issue.

Dr. Love and Dr. Hill remarked on the difficulty of diagnosing dermoids of the ovaries.

Dr. Love then read notes of a case of "Idiopathic Pyæmia."

A CASE OF ACUTE "IDIOPATHIC" PYÆMIA.

BY WILTON LOVE, M.B., HON. SURGEON HOSPITAL FOR SICK CHILDREN, BRISBANE.

G. S., æt. 9, was brought to me on April 16 last, complaining of abdominal pains and headache. The pains were colicky in character, and had only been felt since rising that morning. No diarrhoea, and no history of having eaten anything likely to cause them. Temp. 101°. Ordered him three grains of calomel and a hot bath; to be kept in bed and have milk diet.

Next day I saw him at his own house. Patient was decidedly worse; temp. 104°, pulse 148, respiration 36. No cough; abdominal pains abated; no complaint of headache, but his mother noticed that he was very drowsy and at times delirious. As the calomel had not acted, an enema was ordered, which relieved the bowels, the mother stating that he passed material resembling apple-skins. Next day (18th) he was reported to be much cooler, but still drowsy, and at times talking somewhat incoherently. I was unfortunately unable to see him that day, but was informed by telephone that he was cooler and in no pain, but still "stupid" and drowsy. During that night he had a "bad turn" at 4 a.m., and expired before I could get to the house at 6.30 a.m. The temp. of the body was then 105°.

A *post-mortem* was made that afternoon, with the kind assistance of Dr. Turner.

On opening the abdomen nothing abnormal was discovered, except some enlargement of the spleen, with recent lymph upon its diaphragmatic aspect. Recent lymph also noticed on the abdominal surface of left leaf of diaphragm. Left lung somewhat hepatized at lower margin, which dipped into a little purulent material at the bottom of the pleural cavity. Small purulent foci were seen here and there scattered over both lungs, chiefly sub-pleural, and ranging from a pin's point to a grain of wheat in size. The other organs were apparently healthy. Microscopic examination of portion of lung showed numerous small vessels plugged with cocci, small extravasations of blood, and small purulent foci swarming with cocci. The sections were stained with picro-carmin and Gram, and by Gyzzenke's method.

The interest of this case is two-fold. The symptoms were too indefinite to point to anything, save possibly some intestinal mischief. No history of injury or ear disease could be obtained. The boy was apparently perfectly healthy on April 15th, and at 6 a.m. on the

19th he was dead of acute blood-poisoning, with numerous purulent foci scattered through the lungs, without having exhibited any symptoms which might have suggested the actual condition, save, perhaps, the temperature and the drowsiness. Again, the question is inevitable: By what channel did these cocci enter the blood paths? Through the respiratory or intestinal tracks, or through some trivial wound of skin. It is impossible to say. When we can answer this question satisfactorily we may be in a better position to recognise and to deal with such cases.

Dr. Love showed a microscopic section of the lung stained by Gram's method, in which plugs of cocci were evident in the small vessels.

Dr. TURNER remarked that the pathology of the case was from one point of view perfectly easy to understand; from another extremely difficult. It was quite evident, from an inspection of the distribution of the minute disseminated lesions, that they resulted from a general infection of the blood-stream by micro-organisms. The route by which the micro-organisms entered the blood-stream was not discovered. The only organisms that commonly caused such lesions were tubercle bacilli and pus cocci. The supposition that the case might be one of general tuberculosis was negated by the discovery that many of the minute recent lesions had already broken down into minute abscesses. The conclusion that pus cocci were the cause of the mischief was confirmed by microscopical examination. The causation of these cases of pyæmia, and of the bone suppurations of children which belonged to the same pathological class, was nevertheless very difficult to understand. Pus cocci were found normally in the alimentary canal and on the skin of healthy individuals. They were frequently introduced into the tissues, or even into the blood, without producing any lesions, or at most a local suppuration. To assume that the attacked individuals were usually susceptible to the infection seemed an unwarrantable assumption. It was usually fine healthy children who were attacked. It seemed more reasonable to suppose that the infection depended on the unusual virulence of the cocci. We knew that the virulence of most pathogenic organisms was their most variable property. It could be raised or lowered at will in the laboratory. How it was that these cases should come into contact with specially virulent cocci remained a mystery. Similar pyæmic lesions to Dr. Love's case were not uncommon in fatal cases of scarlet fever; in which disease the streptococci in the throat-ulcers acquired for some reason an unusual virulence.

CORRECTION.

In the paper on Hydatid Disease in N.S.W., by Dr. G. L. Mullins, which appeared in our February issue, an error was made in the table of deaths for Queensland. In the years 1884-5-6-7-8 the deaths from hydatid disease numbered 8, 3, 0, 1, 0 respectively, not as stated.

Martindale and Westcott's Extra Pharmacopœia, eighth edition, 581 pages (1895), 9s., by post 9s. 3d. L. Bruck, Medical Bookseller, Sydney.

NOTICES.

All the Members of the New South Wales, South Australian and Victorian Branches of the British Medical Association receive, for an annual subscription of two guineas, both "The British Medical Journal" and "The Australasian Medical Gazette" free of any further charge. Members of the Queensland branch may obtain "The Australasian Medical Gazette" at a reduced subscription on applying to the Hon. Secretary of their branch in Brisbane.

All communications intended for the Editor may be addressed direct to "The Editor, Medical Gazette, 13 Castlereagh st., Sydney," or to the Branch Editors, Dr. F. G. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, JUNE 15, 1895.

EDITORIAL.

AN INEBRIATE ACT FOR NEW SOUTH WALES.

Most of our readers whose professional practice brings them into contact with all sorts and conditions of men are fully convinced of the necessity for treating confirmed inebriates by means of seclusion. The law allows drunkards who are brought before a magistrate to repeat their debauches again and again on payment of a small fine, or a short term of imprisonment. That such measures will reform the victim of the alcoholic habit is, indeed, an improbability. The rich man pays the fine and returns to drink; the poor one spends a few days in gaol, and makes up for lost time on being liberated. It is now the almost unanimous opinion of the members of our profession that drunkenness is a disease rather than a habit, and must be treated accordingly.

In England the Inebriates Acts provide that a person who is addicted to drink may apply to be admitted to an Inebriate Home for a definite period not exceeding twelve months; but, having voluntarily placed himself under restraint, cannot leave the home until the expiration of the time agreed upon.

There is little doubt that Inebriate Homes are

required in all the Australian colonies, but in order to work such institutions successfully we require an Inebriate Act in advance of those in force in England and Victoria.

During the past few years deaths from intemperance have occurred in New South Wales as follows:—In 1890, 105; 1891, 95; 1892, 107; 1893, 79; or an average of 96.5 yearly. This means that one person in every 11,567 of the population died from the direct effect of drink in each year; but to these must be added those who died from ailments brought on by excessive draughts of alcoholic compounds.

In addition to the deaths from alcohol, we must not pass over a far worse result, viz., insanity. Insanity is increasing alarmingly, and in the returns of the lunatic asylums intemperance in drink stands out boldly as the principal cause, as the following figures will show:—

Year.	Total Admissions.	Caused by Drink.
1890...	725	71
1891...	709	75
1892...	804	86

In the three years there were, therefore, 2,238 persons admitted, of whom no less than 232, or 10.37 per cent., owed their downfall to excessive indulgence in alcohol. There were in 1890 no less than 17,022 summary convictions for drunkenness—a percentage to the population of 1.5.

These figures show the urgent necessity which exists for the passing of an Inebriate Act by the Legislature of the colony. Such an Act should provide for the establishment of Inebriate Retreats to which habitual drunkards could be sent for a limited term, either on their own application or the sworn information of some friend or relation, supported by the certificates of two medical men. Such information and certificates should state that the person named therein is a habitual drunkard who is unable to control himself, or is incapable of managing his affairs, or is dangerous to himself or to others, or is suffering under or recovering from delirium tremens or chronic alcoholism, or is in imminent danger of death from the continuous use of intoxicating drinks. It would be desirable also that the provisions of such an Act should apply to those who are the victims of morphine, cocaine, or other narcotics.

"Drinkers are free to destroy their health and their skill," says Mr. Oppenheimer, in his report on the liquor traffic in Germany in 1885, "to reduce their wife and children to want and misery; and it is only when he has arrived at the last stage, when help from outside is needed for his support and for that of his wife and

family, that the State steps in and puts him in a workhouse, lunatic asylum, or prison, as the case may be. But, meanwhile, what incalculable injury might have been prevented had the State only interfered in the earlier stages of the malady, when, for his own, his family's, and the general interest, he should have been consigned to a properly-regulated hospital for dipsomaniacs, in which total abstinence and wholesome discipline is enforced."

We would then strongly urge upon the Government the immediate necessity for the introduction of a measure which would have the effect of relieving the strain on our lunatic asylums, and preventing the misery and unhappiness which are always found in the home of the incorrigible drunkard.

LETTERS TO THE EDITOR.

A QUESTION OF MEDICAL ETIQUETTE.

(To the Editor of the *Australasian Medical Gazette*.)

DEAR SIR,—A. is called in consultation by B. to see Mr. C., whose wife is also a patient of B.'s. Six weeks after B. has ceased attendance on Mrs. C., A. is called. He suggests that B. be sent for, but patient demurs. A., therefore, continues in attendance on Mrs. C. Was A. right in doing so? It may be mentioned that a son-in-law and married daughter of Mr. C.'s, but not living with C., had been attended by A.

"A SUBSCRIBER to the *A.M.G.*"

[Dr. A., in attending to Mrs. C., was guilty of no breach of medical ethics, if he had not seen her previously in consultation with any other medical attendant, and provided no other doctor was in attendance at the time.

It would, however, have been more in consonance with that friendly feeling which should exist between members of our profession had Dr. A. at once called on Dr. B., and had an amicable understanding concerning this case.—ED. *A.M.G.*]

TYPHOID FEVER AT COOLGARDIE.

(To the Editor of the *Australasian Medical Gazette*.)

DEAR SIR,—I notice in your issue of March 15th, a paper from Dr. Tratman, of Perth, the object of which is to show that the present epidemic of enteric fever at Coolgardie is traceable to atmospheric contagion.

The doctor's premises seem to me to be, to a great extent, incorrect, and this conclusion I differ from *in toto*.

He says—"Coolgardie may be taken to be a waterless desert—that is, without rain or fresh underground water—and it is evident that the usual mode of spreading by the distribution of an infected water supply cannot be operative to any great extent."

With regard to this, I may state that there has been, so far this year a fall of over two inches of rain. The main water supply is certainly derived from the condensers, the price being at present threepence or fourpence a gallon, while it has been very much higher. Owing to the cost of the water, it may readily be imagined that the residents neglect no opportunity of obtaining

any water free of cost. Accordingly, at the bottom of any rise there are little temporary dams thrown up in which to catch the water.

As the miners have been crowded together in tents all over the ground, without any sanitary provision whatever, the water which is conserved is simply the drainage of an area contaminated with sewage.

Round every little clump of scrub in the hills you may see a collection of faecal deposits, and the drainage from this is collected by the residents lower down. The prevalence of fever, and the disastrous results to the community, were not sufficient to deter people from drinking this appetising beverage. This is partly, no doubt, due to the fact that an idea was encouraged by the medical men first on the field, that the epidemic was some peculiar local disease altogether unconnected with the quality of the water supply, an idea, the incorrectness of which should have been abundantly evidenced by the fact that for the first twelve months of the field, under the same conditions, no cases of fever occurred, owing, no doubt, to the want of a focus of infection.

The government engineers have made some large dams at the foot of the slopes, and have carried deep trenches right round the hills to bring the water into the dams. These hills are themselves the repositories of filth, and you may even see deposits of faecal matter here and there along the trenches, which are a few feet deep, and consequently afford some privacy. The water in these dams is frequently used for drinking.

With regard to the mixing of uncondensed water with the condensed, here again a mistake has been made in the paper under notice. The addition of 25 per cent. of the salt water would make a mixture that would be absolutely undrinkable. What is really added to the condensed water, for the sake of economy, is the surface water collected in the dams above referred to. The dam water is quite free from salt, and is quite palatable to the taste, although it is really quite unfit for human consumption.

In quoting cases of people infected after drinking no water but that from their own condensers one very important point has been missed. I must premise that the surface of the ground here consists to a considerable extent of a dry dust, and the violent whirlwinds and wind-storms prevalent here carry the dust everywhere. After a shower the first water that pours off the roofs is nothing but liquid-mud, owing to the dust lodging on the roofs and in the spouts.

The rain-water is accordingly a source of no little danger.

In the same way the dust is carried into the tanks of condensed water. These tanks are as a rule left entirely uncovered, as it is considered that the free access of air renders the water much more wholesome.

Thus, it seems to me that the objection to the possibility of infection from water in these cases disappears entirely.

With regard to the supplying of disinfectants to each individual, as suggested, it would be to my mind absolutely useless if the theory of contamination from the air is accepted.

If the excreta are allowed to dry up, and be blown about, any disinfection of the kind would be utterly inadequate. The germicide would not really come in contact with great part of the dejecta, the germs contained in which would consequently be just as active as ever in causing disease.

The action already taken by the Coolgardie Town Council seems to meet the case, i.e., the enforcement of the use of pans supplied with disinfectants and

periodically emptied and cleansed. The contents of the pans are deposited in trenches, and covered first with lime, and then with a layer of earth two feet in thickness. Where there are groups of tents, public latrines have been erected, and these are looked after by the servants of the council.

The use of cool drinks, such as sodawater, is possibly responsible for some part of the fever. The water used for making these drinks is said to be simply clarified dam-water, instead of condensed water. Although the condensed water cannot be said to be free from risk, it is certainly much less dangerous than the water from the dams.

Of course, in writing thus, I say nothing against the possibility of infection of the atmosphere from flying particles of dust, but I do say that no valid argument has been put forward to prove that the contamination is chiefly, or to any great extent, communicated in this way.

Yours truly,
CHAS. H. HILL,
Acting Health Officer,
Coolgardie.

Coolgardie, W. A.,
May 4, 1895.

P.8.—Since writing the above there has been a further fall of 1½ inches of rain within 36 hours, making a total of about 3½ inches for this year.

“CUNNEEN V. COOPER.”

(To the Editor of The Australasian Medical Gazette.)

SIR,—In the May issue of the *Australasian Medical Gazette* you have a leading article upon the above case, the writing of which is almost upon a par with its unquestionably bad form and bad taste.

As you have used my name in the most unjustifiable manner in this article, you will perhaps allow me to correct a few of the erroneous conclusions incorporated therein.

As far as I can understand the amusingly *ad captandum* arguments of the writer of the article, I have offended, firstly, by appearing in the case at all, and, secondly, by daring to give an opinion at variance with the opinions of (I will adopt your own mode of designating the supposed greatness of these men by withholding any prefix) M'Cormick, Sydney Jones, and others.

As to the first cause of offence, you will perhaps be surprised to learn that at the trial it came out in direct evidence, given in connection with the reading of a letter to Dr. Cooper, that I had offered to absent myself in Queensland, and so run the risk of being committed to prison for contempt of court, rather than appear in the case. What more could anyone do? My offer was not accepted, and as I was subpoenaed I had to go.

As to the second, and, I imagine, the chief *raison d'être* of your article, I have yet to learn that because a man practices in the country his opinions are to be considered of no value as compared to the opinions of the man practising in a town.

I gave my honest opinion in the matter, and I can inform you now that three other men of good standing in the profession, who have examined the *arm, entirely* agree with my ideas in the case.

I can hardly be blamed because the jury agreed with my opinion in the case. They had the advantage of hearing the evidence and seeing the attitude of the various witnesses, and, although I am sure that the

evidence of all the gentlemen you mention was prompted by the most kind and generous motives, their attitudes, whilst in the witness box, gave one the impression of their feeling very far from comfortable, or at their ease.

In conclusion, I must express the hope that the execrable taste and very ungenerous animus displayed in the article referred to will not be a sample of what we are to expect under the new regime of the *A. M. Gazette*.

EUSTACE H. L. PRATT.

Tamworth, N.S.W.,
May 27, 1895.

REVIEWS.

DIET LISTS AND SICK-ROOM DIETARY: A Book of Detachable Diet Lists for Albuminuria, Anæmia and Debility, Constipation, Diabetes, Diarrhoea, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis, and a Sick-room Dietary. Compiled by Jerome B. Thomas, A.B., M.D., Visiting Physician to the Home for Friendless Women and Children, and to the News-boys' Home; Assistant Visiting Physician to the King's County Hospital; Assistant Bacteriologist Brooklyn Health Department. W. B. Saunders, 925 Walnut-street, Philadelphia, 1895; Sydney, L. Bruck. Price, 6s. By post, 6s. 6d.

This is an admirable collection of diet lists and sick-room dietary prepared in a very concise form for the various diseases mentioned in the title. They are detachable, so that the physician in attendance may leave a suitable one with the nurse or person in charge of each patient. As mentioned in the preface, the busy practitioner has little time to write out systems of diet for his patients or to describe the preparation of the requisite foods. There are here in a portable form a set of ten lists (compiled from the most modern works on dietetics), which include all the common pathological conditions in the treatment of which diet plays a prominent part. We have much pleasure in recommending this series of diets, which meets a want, and enables the physician, in the treatment of cases, to regulate the food supply in a most precise and methodical manner.

OVARIAN NEURALGIA AND ITS TREATMENT.—On some Symptoms which Simulate Disease of the Pelvic Organs in Women, and their Treatment by allopiesto-myo-kinetics (massage) and by autopiesto-myo-kinetics (self-movements of muscles under pressure). By A. Rabagliati, M.A., F.R.C.S. Ed., Honorary Gynaecologist, late Senior Honorary Surgeon Bradford Infirmary. London: Baillière, Tindall, and Cox, 20 and 21 King William-street, Strand, 1895.

IN this monograph the author adduces his reasons, arguments, and facts which have led him to alter his views and treatment with reference to neurotic complaints in women, which have hitherto been considered more or less referable to the nervous system. His arguments are that the primary seat of such ailments is not in the nerves; but the muscles, or, rather, the muscle-sheaths, and along with them the nerve-sheaths, the periosteum or bone-sheaths, and many of the joints, particularly the false joints, were so frequently affected, that the disease of these fibrous tissues was the main immediate element to be considered in the cases presenting themselves for treat-

ment. He attempts to show that the clinical totality of the symptoms is due to general malnutrition, and contends that the successful treatment consists in altering the entire nutrition of the patient by changing the diet, prescribing methodized exercises, and making a radical change in the whole habits of life. The author gives full instructions for massage and self-movements, and furnishes copious photographs from life to illustrate the text. The book is well worth perusal, and should find a place in every medical library.

NOTES ON THE NEWER REMEDIES: By David Cerna, M.D., P.H.D. Philadelphia: W. B. Saunders, 925 Walnut-street, 1895.

THIS is the second edition of a fairly useful volume published in America by a gentleman who indulges in the possession of no less than sixteen titles and two degrees! We spare our readers the infliction of the titles which embrace such imaginary distinctions as "Spanish-speaking secretary of the First Pan-American Medical Congress" and other grandiloquent terms. The book itself is a compilation from the various journals, &c., in which new remedies have been described and commented upon, and, whilst containing nothing original, is well up to date, and, as far as we have been able to go into the matter, fairly accurate. But the imposition upon the medical profession of those fearful titles at the beginning is apt to make one look upon the work as merely a peg to hang out the said titles upon, and not to benefit medical knowledge. If this be so, the author might well have selected some other more original subject for the purpose.

THE second annual dinner of the Medical Associations of New South Wales was held at Aaron's Exchange Hotel on Tuesday, 28th May. Dr. W. Nickson, President of the Newcastle Medical Society, occupied the chair, and there were present—Dr. E. J. Jenkins, President N. S. W. Branch B.M.A.; Dr. W. J. Barkas, President Eastern Medical Association; Dr. F. H. Quaife, Chairman N. S. W. Medical Union; Drs. Pearce, Kingsbury, Chenhall, Patrick, Walker Smith, Kirkland, K. Blaxland, H. C. Hinder, Trindall, Reading, Bowker, Thomas, Morgan Martin, Marshall, Kenna, Pope, Allen, McNeill, Bennet, Spencer, Scot Skirving, Crago, McKay, Frizell, Maguire, Mullins, Eames, McSwinney, Bucknell, J. A. Dick, Gordon Macleod, A. Jarvie Hood, Knaggs, Worrall, Alcorn, Pockley, P. J. Collins (hon. secretary), W. H. Coutie (hon. treasurer), and Messrs. Sager, Asprey, Burne, T. L. Mullins, and J. L. Mullins.

There were no speeches, and after dinner, which was admirably served, a most enjoyable programme of music—song and recitation—was proceeded with. Mr. Asprey played an overture "Polka de Concert," Dr. E. Blaxland sang "The Carnival," and Dr. Maguire was encouraged for his rendering of "The Yeoman's Wedding," and gave as encore "Off to Philadelphia." Dr. Knaggs amused the company with an exceedingly clever exhibition of sleight of hand tricks, and the entertainment was brought to a close by Dr. Scot Skirving's amusing sketch of a Scotch divine's sermon, on the text "and Job walked circumspectly." The association is to be congratulated upon the success of the dinner, and Drs. Coutie and Collins were awarded special words of commendation for their successful efforts to make everyone enjoy themselves.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during April to every 1,000 of the population was 2·63, and of deaths 1·13; 191 deaths, or 19 per cent. of the total deaths, occurred in public institutions. The deaths of children under five years of age during the month were 223, or 46·55 per cent. of the total, 180 being under the age of one year. Five deaths of child-bearing women took place during the month, or one death of a woman to every 228 births recorded.

THE new hospital at Berry, which has been erected by Mr. John Hay, of Coolangatta, in order to meet temporarily the wishes of the late Mr. David Berry, who left £100,000 to found and maintain a hospital in Berry, was opened on May 13th.

WE regret to record the death of Robert Fraser Sinclair, M.B., Ch. M. Ed., 1881, who died from pleurisy on June 2nd at Brewarrina, where he had practised for the last two and a-half years.

DR. A. W. G. CRIBB has resigned the position of Medical Superintendent of the Newcastle Hospital, which he has held for the last three years.

DR. H. L. CUMMING has removed from Annandale to Braidwood.

DR. M. E. FITZGERALD, formerly of Isistford (Q.), has succeeded to Dr. Watt's practice at Hay.

DR. H. C. HINDER, of Ashfield, has been elected Honorary Assistant-Surgeon at Prince Alfred Hospital, Sydney.

DR. S. H. HUGHES has commenced practice as oculist in Liverpool-street, Sydney.

DR. C. JOHNSON has removed from Forbes to Robertson.

DR. R. H. JONES has commenced practice in Sydney as oculist in Macquarie-street.

DR. MACHATTIE has been appointed by the Railway Commissioners local Railway Medical Officer for the Bathurst district.

DR. J. B. MCILROY has succeeded to Dr. Cumming's practice at Annandale.

DR. E. H. MORGAN has left Mount Victoria.

DR. J. A. PYBUS, formerly of Glebe Point, has returned to the colony, and resumed practice at 44 Margaret-street, Sydney.

DR. SYDNEY H. SCHRADER, son of the late Dr. Schrader, of Walcha, has commenced practice in Waverley, near Sydney.

DR. G. E. TWYNAM, late of Darlinghurst, having sold his practice to Dr. Gillon, left for the old country by the R.M.S. "Orontea."

DR. G. WATT has removed from Hay to Narrandera.

NEW ZEALAND.

THE proportion of deaths registered during April to every 1,000 of the population was 1·24 for Auckland and suburbs, 0·67 for Wellington with suburbs, 1·09 for Christchurch and suburbs, and 0·82 for Dunedin and suburbs. The total births in these four boroughs during April amounted to 336, against 342 in March. The deaths in April were 165, to which males contributed 89 and females 76. Fifty-five of the deaths

were of children under 5 years of age, being 33 per cent. of the whole number; 45 of these were under 1 year of age.

NEWS has arrived from London of the death of John Hay Honeyman, L. et L. Mid., R.C.P. et R.C.S. Edin., 1878, formerly in practice at Auckland.

DR. THOS. BURNS, late of the Auckland Asylum, has been appointed Medical Superintendent of the Lunatic Asylum at Porirua, near Wellington.

DR. E. E. FOOKS, late of the Seacliff Asylum, has been appointed Medical Superintendent of the Lunatic Asylum at Wellington.

DR. G. HODGES has removed from Mosgiel to Alexandra South.

DR. D. P. JAMES, of Wellington, has been appointed a health officer for the port of Wellington.

DR. T. R. KING, late Medical Superintendent of the Wellington Lunatic Asylum, has commenced practice at Opunake, 48 miles south of New Plymouth.

DR. M. A'B. MCARTHY, a recent arrival, has commenced practice at Greytown North, 58 miles N.E. of Wellington.

DR. B. H. MACKILL has resigned his appointment as House Surgeon at the Auckland Hospital.

DR. MATTHEW MILLER, a recent arrival, has commenced practice at Port Chalmers.

DR. R. VON MIRBACH, who has practised at Waipawa for more than sixteen years, will shortly leave on an extended trip to Europe.

DR. J. ROSS, formerly of Wairoa, has succeeded to the practice of Dr. R. v. Mirbach, at Waipara.

DR. J. WILKINS has been appointed a surgeon to the Permanent Militia at Auckland.

QUEENSLAND.

JAMES HOWLIN, L. et L. Mid., F.P.S. Glas., 1860, L.K.Q.C.P. Irel., 1861, died at Laidley on May 3rd, aged 57 years. The deceased gentleman was born at Kingstown (Ireland), and came out to Queensland in 1862, when he at once commenced practice at Dalby, where he resided almost continuously up to the middle of last year, when he removed to Laidley. He was a J.P., and formerly held the positions of Government Medical Officer for the Dalby district and of Honorary Surgeon to the Toowoomba Hospital.

THERE were not less than sixty-five (65) applicants for the post of surgeon to the Winton hospital, vacated by Dr. F. Wellford last month, the successful candidate being Dr. Bowkett, of Herberton. Winton is the centre of a pastoral district 941 miles north-west of Brisbane. The institution was closed for some time last year from want of funds.

DR. H. C. GARDE, of Maryborough, has been appointed city health officer at a salary of £50 a year.

DR. E. D. LA TOUCHE, formerly of Wood's Point (Vic.), has commenced practice at Charters Towers.

DR. J. I. MOORE, late of Springsure, and Dr. Morgan, of Gympie, left for Europe by the R.M.S. "Ormuz" on a twelve months' holiday.

SOUTH AUSTRALIA.

DR. R. H. PERKS, Medical Superintendent of the Adelaide Hospital, was entertained at dinner on May 2nd, at the South Australian Hotel, by the medical and surgical staff of the hospital, as a proof of the high

appreciation in which he is held by his colleagues, and of their continued confidence in him as the chief resident medical officer of the Adelaide Hospital.

DR. A. E. H. WATSON has commenced practice at Port Broughton.

TASMANIA.

DR. C. A. HOGG has been appointed house surgeon at the Launceston Hospital.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during April to every 1,000 of the population was 30.88, and of deaths 14.83. Males contributed 51 per cent. and females 49 per cent. to the mortality of the month. Children under five years of age contributed 81 per cent. to that mortality, as against 34 per cent. in April, 1894. Ninety-five deaths, or 18 per cent. of the whole, took place in public institutions.

JAMES WILLIAM KING, M.B.C.S. Eng., 1849, L. Mid. Anglesey Lying-in Hosp., Dubl., 1846, a colonist of thirty-three years' standing, and formerly of Ballarat, died at his residence at Northcote, near Melbourne, on the 20th May, aged 73 years.

DR. C. A. COURTNEY has removed from Ballan to Learmonth.

DR. J. L. FENTON has removed from Yakandandah to Omeo.

DR. S. MACBIRNIE, late of Heywood, has been elected Medical Officer to the Coal Creek miners at Korumburra, by a majority of 80 votes over Drs. McGee and Guinaud, the late medical officers.

DR. F. C. MADDEN, late of the Melbourne Hospital, left for England by the R.M.S. "Ormuz."

DR. A. G. SALTER, late of the Melbourne Women's Hospital, has been appointed Junior Resident Surgeon in the Ballarat Hospital.

DR. E. YEATES has left Learmonth.

WESTERN AUSTRALIA.

DR. T. G. DAVY, formerly of Auckland (N.Z.), has returned from his trip to England, and commenced practice at Coolgardie.

DR. C. MATTEI, formerly of Hill End (N.S.W.), has returned from Europe, and commenced practice at Northam, 66 miles N.E. of Perth.

MEDICAL APPOINTMENTS.

Castilla, Mary Elizabeth Amy, M.B. Melb., to be Public Vaccinator at the Women's Hospital, Melbourne.

Baton, Joseph, M.R.O.P.L. L. Mid., R.C.S.I., to be Government Medical Officer and Vaccinator for the district of Eylston, N.S.W.

Fenton, James Lumsden, M.B., to be Health Officer for Omeo Shire Vic.

Fox, Walter, M.B., M.S. Glas., to be Government Medical Officer and Vaccinator for the district of Narandera, N.S.W.

Gething, William John, L.R.C.P. & R.O.S. Ed., to be a public vaccinator in South Australia.

Hart, John Wesley, M.B., M.S. Ed., to be Government Medical Officer and Vaccinator for the district of Barraba, N.S.W.

Hoets, Alton Kingsley, M.R.C.S.E., to be Government Medical Officer and Vaccinator for district of Burrows, N.S.W.

Holmes, Louis Seenger, L.R.C.S., to be Health Officer for the port of Launceston (Tas).

Jernyn, Frederick David, M.B., Ch. B. Melb., to be a public vaccinator in South Australia.

Laker, Donald, M.B., Ch. M. Sydney, to be Government Medical Officer and Vaccinator for the district of Singers, N.S.W.

MacKnight, William Crawford, M.B., to be public vaccinator at Cairnsbrook, Vic.

Neale, Alfred James, M.D. Ed., to be a public vaccinator for the district of Palmerston North, N.Z.

Rowlands, George Hamilton, L.R.C.P.S. Ed., L.F.P.S. Glas., to be Government Medical Officer and Vaccinator for the district of Narromine, N.S.W.

Watson, Alexander Eugene Henry, L.R.C.P. & R.O.S. Ed., to be a public vaccinator at Port Broughton, S.A.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Jones, Robert Henry, M.B. & B.S. Melb., 1890.
Nugent, Edward Joseph, L.K.Q.C.P. Irel., 1873; L.R.O.S. Irel., 1886.
Innes, Henry James Dempster, M.R.C.S. Eng., 1880.
Davies, Alfred Joseph, L.R.C.P. Edin., 1890; L.R.O.S. Edin., 1890; L.F.P.S. Glas., 1890.

For additional registration:—

Smith, Grafton Elliott, M.D. Sydney, 1896.
Corlette, Cyril Ernest, M.D. Sydney 1895.
Hall, George Reginald Percy, Ch.M. Sydney, 1895.
Jackson, John William, Ch.M. Sydney, 1894.
Spark, Ernest James Schnidham, Ch.M. Sydney, 1895.
Butter, Graham Ford, Ch.M. Sydney, 1896.
Studdy, William Bradridge, Ch.M. Sydney, 1895.
Fordyce, Henry St. Clair, Ch.M. Sydney, 1895.

NEW ZEALAND.

McCarthy, Marham & Beckett, L. & L. Mid., R.O.P. & R.O.S. Ed., L.F.P.S. Glas.

Tosswill, John Cecil, M.B., M.S. Edin.

Miller, Matthew, M.D. St. And., L.F.P.S. Glas.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

FAILLES.—On the 28th April, at Coonabarabran, N.S.W., the wife of F. G. Failles, M.R.O.S., of a son.

MALONEY.—On the 17th May, at West Melbourne, the wife of Dr. William Moloney, M.P.; a daughter.

MOORE.—On the 14th May, at 9 Collins-street, Melbourne, the wife of Dr. Wm. Moore; a daughter.

MUIR.—On the 28th May, at Portarlington, Vic., the wife of Dr. Wm. C. Muir, of a son.

PINNIGER.—On the 18th April, at Beechworth, Vic., the wife of W. B. Pinniger, M.B., of a son.

POCKLEY.—On the 19th May, at North Sydney, the wife of F. Antill Pockley, of a daughter.

SOHLESINGER.—On the 24th April, at St. Kilda, Vic., the wife of R. E. Solesinger, M.B., M.Ch. Edin., M.R.O.S. Engd.; a daughter.

SHIRLOW.—On the 20th April, at Neutral Bay, N.S.W., the wife of Dr. W. J. Shirlow, of a daughter.

STRANGMAN.—On the 7th May, at Ororoo, S.A., the wife of Cecil L. Strangman, L.R.C.P. & S., &c., of a son.

WELD.—On the 6th May, at Hopetoun, Vic., the wife of Dr. J. C. Weld, of a daughter.

WHEELER.—On the 7th May, at Toowoong, Q., the wife of Dr. J. A. Wheeler, of a daughter.

MARRIAGES.

HENRY-NEWTON.—On the 24th April, at the Wesleyan Church, Ashfield, Arthur Geddes Henry, M.B., Ch.M., of Callan Park, N.S.W., to Emily, elder daughter of the late W. J. Newton, of Peterham.

SKINNER-KENNY.—On the 7th May, George Henry Skinner M.R.O.S., L.R.C.P., to Sarah Margaret, second daughter of P. Kenny, of Broadford, Vic.

STEPHENS-DAVIES.—At the Cathedral, Armidale, on the 26th May, Samuel Stephens, M.R.O.S., L.S.A., of Walcha, N.S.W., to Alice Catherine, second daughter of Captain J. A. Davies, Police Magistrate, Macleay River District.

THE New South Wales Board of Health having decided to discontinue supplying medical practitioners with anti-toxin for diphtheria, Mr. Bruck has made arrangements for a weekly supply of Buffert's anti-toxins, which he will sell at a low figure; and, pending the arrival of the first lot, Mr. Bruck is in a position to supply B. and W.'s and other makes.

REPORTED MORTALITY FOR THE MONTH OF APRIL, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from											
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.
N. S. WALES.																
Sydney	111,244	255	127	40	...	...	3	2	...	6	12	13	10	3	1	1
Suburbs	275,615	858	352	183	...	1	8	...	8	23	27	28	20	12	...	4
NEW ZEALAND.																
Auckland & suburbs..	42,718	83	53	17	...	...	1	1	...	4	4	5	3	3	...	...
Christchurch ..	42,211	88	46	22	...	...	...	...	1	3	4	7	7	...	...	2
Dunedin ..	48,991	78	40	8	...	...	1	1	...	1	4	1	2	4	1	...
Wellington ..	38,710	87	26	8	...	...	...	...	5	...	1	2	2	2	...	...
QUEENSLAND.																
Brisbane	56,075	...	...	...	}	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582	...	...	...		...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA.....	345,888	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	39,749	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																
Hobart	36,201	67	51	15	...	...	...	...	6	4	1	3	...	6	...	...
Launceston	23,075	54	30	8	...	...	...	...	1	...	2	5	1	3	...	...
Country Districts	99,927	247	72	...	...	...	...	1	4	5	4	...	...	...	...	1
VICTORIA.																
Melbourne	64,171	98	61	} 166	...	...	6	1	20	17	79	37	42	25	2	10
Suburbs	380,661	998	474		...	...	...	...	...	...	...	...	...	...	...	...
Ballarat and Suburbs	42,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
WESTERN AUSTRALIA*	82,073	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending.

METEOROLOGICAL OBSERVATIONS FOR APRIL, 1895.

STATIONS	THERMOMETER.				Mean Height of Barometer.	RAIN.		Mean Humidity.	Prevailing Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.		Depth.	Days.		
						Inches			
Adelaide—Lat. 34° 55' 33" S.; Long. 136° 36' E.....
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.....	...	71.	58.9	43.	...	1.78	14	63	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.....
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.....	...	71.4	49.8	29.6	...	2.	7	77	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.....	...	64.	48.2	35.	...	1.83	14	79	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.....	...	7.8	54.6	39.	30.042	0.87	6	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.....
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.....	...	84.9	60.1	39.9	29.987	1.55	11	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.....
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.....	...	79.	64.5	50.8	30.190	2.32	13	79	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.....	...	66.	53.6	41.	...	11.23	19	74	...

AUSTRALASIAN MEDICAL GAZETTE.

CLINICAL LECTURES ON HYDATID DISEASE.*

BY ALFRED AUSTIN LONDON, M.D. LOND.,
LECTURER ON FORENSIC MEDICINE AND
ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

FIRST SERIES.—THE ADVENTITIOUS SAC OF HYDATID CYSTS.

I.—INTRODUCTION—SCOPE OF THE LECTURES— NOMENCLATURE—FALLACIES.

WHILST engaged in editing the late Dr. Davies Thomas's work on hydatid disease¹, I was impressed with the idea that neither he, nor any other writer, had sufficiently emphasised the great importance, from the clinical aspect, of that structure which usually surrounds a hydatid cyst, and is variously known as the Adventitious Capsule or Sac, the Fibrous Capsule or Sac, and which is frequently and wrongly spoken of as the Ectocyst². Not only, as it seems to me, are partially incorrect views as to its origin and function perpetuated, but sufficient stress is not laid upon the influence that the probable condition of the adventitious sac should exercise in our prognosis of any given case.

I propose, therefore, in these lectures first to describe the structure of the adventitious sac met with in connection with hepatic cysts, and to discuss its probable origin, its functions, and the results of its inflammation or degeneration. Subsequently, I propose to deal with the adventitious cyst as met with in the lungs and in other situations, and finally to consider the conditions under which it may be absent altogether.

There is little to choose between the words "adventitious" and "fibrous," as applied to the sac, for both are appropriate. Whilst the word "fibrous" actually describes its structure when present, the word "adventitious" indicates that the sac or capsule is not an integral part of the parasite, but is something "added extrinsically."³ Probably a combination of the two adjectives would be the most strictly accurate designation for the sac, but the "adventitious fibrous sac" would be a cumbersome title for general use, and one may therefore be permitted to use either adjective independently.

*These lectures were delivered at the University on June 31st and subsequent dates.

1. Hydatid Disease, vol. II., by the late Dr. J. Davies Thomas (Bruck, Sydney)

2. *E.g.*, Russell, *Intercolonial Quarterly Journal of Medicine and Surgery*, Feb., 1896, p. 317; and Bond, *Brit. Med. Jour.*, 1891, vol. 1, p. 796.

3. "Walker's Dictionary."

Besides being confusing, it is quite incorrect to use that somewhat tempting word "ectocyst" as designating the adventitious sac. This was originally applied by Huxley⁴ to the outer layer of the hydatid membrane proper, and its use in this sense is sanctioned by the greatest of English-speaking helminthologists, Cobbold.⁵

For convenience, too, it is better to restrict the use of the word "cyst" to the parasite, "sac" being taken to mean the adventitious capsule.

Many writers convey to one the idea that they regard the adventitious sac as a structure which originates from "irritation" of the tissues in which the parasite is lodged, its chief function being to encapsulate the hydatid cyst as though it were a foreign body, such as a bullet⁶. Now, I doubt whether it is fair to charge a living hydatid cyst with the offence of irritating the surrounding tissues. Although in one sense a foreign body or intruder, in another sense the hydatid is an accepted guest, even if an unwelcome one, and the organ or structure in which it develops, so far from resenting its presence, performs its duty as a "host" in providing suitable accommodation for its guest, and in supplying it with suitable nourishment. Generally speaking, the relations of the parasitic guest and of its host continue to be of a most amicable character, until something occurs to cause the death of the former, and when the cyst is dead and virtually has become a foreign body it does not even then necessarily cause irritation; it is only now that the sac, no longer required to supply nourishment to the hydatid, can be said to act merely as a capsule, its only remaining function being that of giving the cyst decent and permanent interment. On account then of what I consider to be this misleading idea as to the primary function of the sac, I would propose to avoid altogether the use of the word capsule.

II. THE ADVENTITIOUS SAC OF HEPATIC HYDATIDS.

(a) *Origin and Development of the Sac.*

Although I believe it to be true that the living hydatid does not "irritate" the tissues which surround it, it is certain that, from the moment the embryo commences its development in the liver substance, it exerts pressure upon, and causes atrophy of the parenchymatous cells in its neighbourhood, and obliterates some of the smaller blood-vessels and bile-ducts, whilst the fibrous tissue survives, and is probably converted directly

4. Proc. Zoological Soc., 1862.

5. Entozoon, p. 363.

6. Russell, op. cit., p. 318.

into the adventitious sac. This absorption of the parenchymatous tissue of the liver may be carried to such an extreme degree that the whole of the right lobe may be destroyed⁷. Let us try to depict these changes from their commencement.

I do not think it is necessary to trace the steps of the process whereby the boring or hexacanth embryo gains access to the liver, but we will accept provisionally the doctrine that it is carried along by the blood stream in a gastric tributary of the portal vein, and that it ultimately becomes arrested in a portal capillary. As in size⁸ it is only a trifle larger than a red corpuscle, its arrest is probably a voluntary stoppage on the part of the embryo, the result of a selective preference for the liver. Whether the embryo remains inside the blood-vessel or bores through its wall into the surrounding cellular tissue is uncertain. If it remains and develops in the vessel, the epithelioid lining of the portal capillary is the origin of the smooth internal aspect of the mature sac, and the delicate perivascular areolar tissue is the rudimentary adventitious sac. If the embryo burrows out of the vein, then the cells of the areolar tissue are probably differentiated into the smooth lining of the sac. It is said now to cast off its hooks, and it is termed a resting scolex or embryo. As its length is only about a hundredth part of the diameter of a liver lobule⁹, we can easily imagine it implanted between the rows of cells in such a lobule. Soon its growth will entail pressure atrophy of the adjacent cells, until at the end of about eight weeks, perhaps, if we may judge from Leuckart's observations on the pig, the young hydatid cyst, for such it may now be termed, will be found to have caused absorption of all the hepatic cells in the liver lobule, and the intra-lobular fibrous tissue will have become condensed, and stratified, to form, along with the interlobular tissue, the adventitious sac.

The lobule the hydatid occupies is the centre naturally of a group of surrounding lobules. At the end of about twelve weeks these may have all become absorbed, and at the end of twenty weeks we may find that the hydatid cyst measures about 12mm. in diameter. As its growth proceeds, unless it be actually situate in the centre of the liver, at one aspect the cyst must now approach the surface of the organ, and finally it will reach this surface, all the parenchyma being absorbed between the cyst and the capsule of the liver. Now in this direction it probably meets with less resistance, and henceforward its growth appears

to be mainly in this one direction, so that it bulges from the surface of the liver and may continue to stretch the liver capsule and its peritoneal covering until in one direction perhaps it may reach the pelvis, or, in the opposite direction, may push the diaphragm high up into the chest, much in the same way as an ovarian cyst enlarges and carries the peritoneum before it.

CASE I.—ILLUSTRATING EXTREME ABSORPTION OF THE RIGHT LOBE OF THE LIVER, HYPERTROPHY OF THE LEFT LOBE, AND DIAPHRAGMATIC ADHESION.

JOHN T.—ADELAIDE HOSPITAL, JANUARY, 1894.

Patient had been operated upon for hydatid cyst of the right lobe of the liver. At the autopsy the caudate, quadrate, and spigelian lobes of the liver, together with the gall-bladder and portal vessels, could be defined, but there was no trace of liver substance in the right lobe, which was converted into a thick-walled granulating cavity, and was adherent to the diaphragm. The left lobe was so greatly hypertrophied as to weigh 2½lbs., as against the 1½lbs. of the rest of the liver.

(b) The Structure and Appearance of the Sac.

If we examine under the microscope a section of the intra-hepatic portion of an adventitious sac we find that it consists of bundles of fibrous tissue. Near the inner surface of the sac these bundles are arranged in a dense, wavy series of varying thickness; as we get away from the inner surface the bundles of fibres form an open network, and finally coalesce with the sclerosed fibrous elements of the liver substance. With appropriate staining numbers of connective tissue cells may be made out, even amongst the denser layers of fibrous tissue. Vessels and lymphatics are numerous and of considerable size. On the borderland between normal liver and sac tissue groups of hepatic cells may be distinguished.

To the naked eye the extra-hepatic portion of the sac of a hydatid cyst is not very different in appearance from a simple ovarian cyst. The peritoneal surface has a shiny, smooth appearance, but the degree of opacity or translucence varies considerably; it may be so delicate as to allow the fact to be made out that the fluid contained in the cyst is quite clear, or is stained with bile pigment¹⁰ or it may undergo changes and become so thick, and perhaps coated with organised lymph on its inner surface, that even the occurrence of suppuration within the sac cannot be ascertained. Where inflammation or degeneration of the sac has not occurred, the inner aspect during life has a delicate pink tint, and is quite as smooth and shiny as the outer or peritoneal. The examination of the sac of very large hydatids will support my statement that

7. Case I.

8. Leuckart gives the size of an ovum as 0.01mm.; that of the red corpuscle being 0.0075.

9. This is given as 1 to 2 mm., "Quain's Anatomy."

10. Case II.

a liver hydatid does not of necessity cause irritation or inflammation of the tissues surrounding it; for we find that cysts may attain to very great size without contracting adhesions on the peritoneal aspect of the adventitious sac. Nor does the sac become adherent to the hydatid cyst itself, which is in close apposition to it; organic adhesion to an extra-vascular substance we must judge to be impossible, although agglutination with lymph may perhaps occur, just as sealing-wax or gum will adhere to one's finger; sections of old degenerated hydatids fail to show the slightest evidence of organic adhesion. Further, it should be noted: that no layer can be peeled off the inner surface of the sac, nor can the sac itself be demonstrated to be laminated; and that the thickness of the sac is not proportionate to the size of the contained hydatid.

CASE II.—ILLUSTRATING THINNESS OF SAC, OSMOSIS OF BILE PIGMENT INTO INTERIOR OF CYST, AND ABSENCE OF ADHESION.

MRS. S., PRIVATE HOSPITAL, 25/4/1893.

At the autopsy, after an operation for pulmonary hydatids, I found on the convex surface of the liver an unruptured cyst of the size of a cocoon. The sac was so translucent that the fluid contained within the cyst was easily seen to be bile-stained and slightly turbid.

(c) The Function of the Adventitious Sac—Osmosis.

The function of the adventitious sac is probably of a twofold nature. It supplies without doubt the hydatid cyst with nourishment, and it probably removes effete products from its interior, the former duty being discharged by a process of osmosis between the fluid in the interior of the hydatid cyst and the blood contained in the arterial capillaries, which are richly distributed on the inner aspect of the adventitious sac, the dialysing membrane consisting of the thin walls of the capillaries and the hydatid cyst which is in direct apposition to them. It is probable that only crystalloid substances can permeate this barrier, for analysis of hydatid fluid shows that its solids consist mainly of saline material, and especially of sodium chloride, together with a variable amount of sugar. Albumen is only exceptionally found as a constituent, and if in the form of peptones albuminous substances are diffused, as they probably could readily be, through the chitinous ecto-cyst, one must suppose that they are utilised and elaborated by the endo-cyst for the growth of the parasite. About excrementitious products we know very little, but traces of urea have been found in cysts unconnected with the kidney, and also succinic acid. It is conceivable that these bodies could be dialysed through the

hydatid membrane, and absorbed by the veins or lymphatics of the sac. There is one substance which we have every reason to suppose exists in hydatid fluid, probably as a ptomaine or toxin, and which cannot dialyse through the membrane, viz., the substance which gives rise to shock and urticaria¹¹.

That such osmosis does actually occur is proved by the fact that the fluid of an unruptured hydatid cyst may be tinted with green bile pigment¹², and that where the mother cyst has ruptured, and the adventitious sac has suppurated, daughter cysts may be seen floating about tinted in the same manner¹³. It does not seem as though the pigment of the blood ever permeates the hydatid cyst, possibly because the blood corpuscles and blood pigment are more intimately combined than the bile pigment is with the other constituents of bile.

ORIGINAL ARTICLES.

A CASE OF EXTRA-UTERINE FCETATION AND OPERATION.

By DR. E. J. A. HAYNES, OF PERTH, W.A.

EARLY in November last I was called in to consult Mrs. S. about a persistent vomiting which had made its appearance recently. She was 38 years of age, and had been married 15 years. She had one son, who lived to be five years old; and she had a miscarriage two years after birth of son. That was seven years ago. Since then she has been constantly complaining of uterine disturbance, for which she was treated by several doctors in Melbourne. She had also suffered much from liver trouble, and it was on account of supposed affection that she called me in. On learning that six weeks had elapsed since last period, I suggested a probable pregnancy. On examination per vaginam, the uterus was enlarged, and I could distinctly feel the left fallopian tube much enlarged with an indistinct tumor, which I took for an enlarged ovary. I prescribed oxalate of cerium, which relieved the symptoms like a charm. All went well till the 3rd December last, when I was called urgently by her husband, who stated that his wife became suddenly ill when stooping over the fire while frying some breakfast meat. I found her on the floor in utter state of collapse, extremely pallid, and almost pulseless. I had her removed to bed. Per vaginam, I could distinctly feel a soft tumor, which had pressed down the roof of the vagina, and completely filled the posterior cul de sac. I

11. *Roy, Lancet*, vol. L, 1887.

12. Case II.

13. Case published in *Australasian Medical Gazette*, 1895, page 198

injected ergotine and morphia and applied ice to abdomen, and enjoined complete rest. After a few weeks of constant attendance, she recovered so much that she was able to get about her house. She complained, however, of extreme pains at intervals, which were relieved by morphia, but I could detect a large oval tumor rising out of the pelvis on left side, and which could be distinctly made out by the bi-manual. The uterus could be detected much displaced to left side. It was fully one month after the urgent symptoms of 3rd December before any discharge made its appearance per vaginam, but when it did occur it became intermittent till date of operation. The uterus was now nearly double its normal size. There was also vesical trouble, which was aggravated at the onset of rupture, and became more and more troublesome, at times most distressing. An unfortunate condition also was the appearance of albumen in the urine. The diagnosis I made on the 3rd of December was rupture of an extra-uterine foetation, was amply proved by subsequent symptoms and operation. This is the third case I have had since my starting practice in Perth four years ago. The first was at eight months, on which I operated, and reported in your journal about two and a half years ago. The second one ended by being discharged through an abscess in the vaginal vault, and the third this one, which I operated on at 11 a.m. on 27th February last. I called in Dr. White, of Fremantle, Dr. Stewart, of Guildford, and Dr. Hitch, of Perth, and they concurred in the diagnosis and projected operation.

Dr. Hitch gave the chloroform. I made the median incision from umbilicus to pubes, but had to enlarge the opening afterwards. No difficulty was experienced in opening into the peritoneal cavity. The intestines were kept back by means of a large flat sponge wrung out of hot water. A large, hard mass was then discovered a few inches above the cavity of the pelvis, passing down into the pelvis and filling Douglas' sac. It extended from left side to about one and a-half inches to right of median line, pushing the uterus away to the right side. The peculiar hardness of the mass and its extreme firmness suggested, on first examination, a malignant growth. The rupture had taken place into and between the layers of the broad ligament, and in its growth it dissected up the sub-peritoneal tissue, and pushed all the structures before it, notably the bladder, which was spread over the tumour, and I fail to see how this could have escaped injury had I not taken the precaution to introduce a soft catheter into the bladder. I mention this so that other operators may be on their guard. I have often seen the bladder displaced, but not to such an extent as in this case.

I dissected off the peritoneal layer covering the tumour, and then proceeded to remove it. The placenta formed as it were an investing sac, and had grown above the foetus. The hæmorrhage was profuse during the removal, but it soon ceased when all the placenta was removed. Whilst removing the placenta an abscess burst, its contents flying out of the abdomen and smearing Dr. White's face. It had a putrid smell, being partly composed of pus and a sero-sanguineous fluid, which I suppose had filled the amnion, or was contained in the chorionic villi. After removal of the placenta the sac contracted to the size of an orange. The peritoneal toilette having been very carefully completed, the abdominal wound closed, and a glass drainage-tube inserted, the dressing was applied, viz., iodoform gauze and wool, a flannel bandage and strapping adjusted, the patient was removed to her bed, and came out of the chloroform very well. I forgot to mention that the uterus was a little more than twice its normal size; the right ovary and fallopian tube were also normal. The left fallopian tube was the thickness of a finger. The foetus was from about six weeks to two months old, and, although it ceased to live after the rupture, still the placenta went on increasing in growth to about the size of a normal six months' placenta. The substance of the placenta was very hard and friable.

The patient remained easy for about six hours, when very distressing vomiting took place, accompanied by a good deal of pain. I ordered hot water to be sipped, which relieved both pain and vomiting, and as she seemed restless at night, and pain and vomiting was returning, I gave her a quarter of a grain of morphia subcutaneously, which composed her, and she slept for six hours. When she woke she passed her water, which, as before, was high-coloured. At 9 a.m. next morning her temperature was 99.5°, pulse 84, and fairly strong. I ordered champagne and ice, which relieved her. She took also some milk. I drew off her water, but scarcely one ounce came away. She complained of great pain over her loins. I gave her another injection, as she had also a good deal of abdominal pain; this relieved her till about 1 p.m. I drew off her water, but only about 3ii. came away. I then gave her an injection of pilocarpine, but it seemed to increase her pain. She was able to keep down a fair quantity of milk and beef tea, with Brand's extract. After 3 p.m. she seemed to sink, her breathing became deep and stertorous, from which she did not rally, and she died about 11 p.m., just 36 hours after the operation. I tried at 6 p.m. to draw off her water, but none came away. Her temperature never rose above

100°, her pulse being soft and rapid till she passed away. I have no doubt that suppression of urine was the immediate cause of death, due, no doubt, to shock on an already diseased state of the kidneys. The discharge came away freely through the glass drainage-tube, and was always sweet, and the tube acted splendidly. We were fortunate enough to have an autopsy, which Dr. Hitch and myself performed next morning. The abdominal incision had partly, and the peritoneum had completely, united; the peritoneum had to be torn through; there was scarcely any discharge in the sac. There was no lymph, or any appearance of peritoneal inflammation. We very carefully examined both uterus and bladder, and found them intact, but both kidneys showed signs of disease. They were very much contracted and congested, and it was impossible to strip the capsules off them. It may be contended that when the symptoms of 3rd December pointed to rupture of a gestation sac I should have operated, but I think most authorities are against such a procedure, and I did the right thing to wait till I thought the placenta had ceased to grow. However, the treatment was so successful up to the date of operation that I would follow the same course again. The death of the patient was by no means due to the operation, but to causes over which I had no power, and I might have left the patient alone if she were free of pain but all through the pain and vomiting seemed to make life intolerable to her, and her wish was to be operated on.

EPIPHYSEAL FRACTURES OF THE FEMUR.

BY F. W. ELSNER, F.R.C.S.I., LATE OF MELBOURNE.

SINCE October 1893 I have met with two instances of this accident, which might be called either a dislocation, a fracture, or a separation of the epiphyseal end of the femur. Both cases resulted from a similar cause. The first was caused by a kick of a horse, the second by the kick of a cow; yet the results in the two cases were so dissimilar that I have thought it worth while to place them upon record. Whilst I was acting for Dr. Walley, in Tamworth, during the latter part of the year 1893, a little boy named Bertie M., *æt.* 13, was admitted to the Tamworth Hospital on October 1st, under my care, and I have Dr. Walley's kind permission to publish an account of his case. The state of affairs on admission was this:—The right leg was drawn up on the inner side of the shaft of the femur, the end of which protruded externally as if about to perforate the skin; tibia and fibula and patella

were all intact, but pulled inwards and upwards, as if the condyles had been split, and the inner one pulled up, with the leg bones attached, by the powerful muscles of the thigh. The leg, plus the attached part of the femur, whatever it might be, was freely movable in all directions. There was no crepitus, and reduction of the dislocation or fracture without chloroform utterly impossible. There was enormous swelling and effusion, and a great ecchymosis over and around the femoral protuberance showed that smart hæmorrhage must have occurred at the seat of injury. The history was that a horse had kicked the child just above the knee, externally, and that as soon as it was possible Dr. Vickery, who is not in active practice, and on whose station the accident occurred, temporarily secured the limb, and sent him on to Tamworth, a distance, I believe, of some twenty to thirty miles. Finding it impossible to effect a reduction of the injury, I telephoned for Dr. Harris, and upon his arrival we chloroformed the youth and endeavoured to bring the parts into apposition. The matron, a nurse, Dr. Harris, and myself, individually, and finally collectively, failed to make the slightest impression upon the leg, which, as soon as it had been extended a little, immediately began to ascend again, so that the shortening must have amounted to several inches. After a considerable amount of time had been spent in these futile endeavours we put the leg up with a long Liston and a weight at foot, counter extension by lowering the head and elevating the foot of the bed. For some time this effected a reduction of the shortening, but the external protuberance always persisted, and I feared it would break through the skin every day. Dr. Harris and I devoted another forenoon to the task of reduction under chloroform a week or so later, but without success. By way of experiment we now placed the limb upon a MacIntyre, and severed the tendo-achilles. By this means the appearance of the limb was somewhat improved, but that was all. Dr. Walley's own fractured leg had so much improved by October 22nd that he was able to see the case with us on that date, and to give us his valuable advice and assistance. The diagnosis being as obscure as the treatment was ineffectual, Dr. Walley recommended cutting down upon the protruding bone and seeing what was really the matter. I had that idea after the first ineffectual attempt at reduction, but the consideration of converting an unknown quantity into a definite compound-fracture was paramount, and I temporised. On cutting down over the bone we found that the epiphysis and condyles of the femur had become detached, and were securely seated upon the head of the tibia, whilst the

protruding part was the end of the femur, which was rough and bare, but not like an ordinary fractured surface. Even with the fracture exposed, it was impossible to bring the surfaces into apposition, to pull the leg with its attachments into its proper position. With a Butcher's saw I removed successive discs of the femur until the ends could be approximated easily. Some one to two inches of the bone had to be sawn off to do this, and I felt extremely doubtful as to whether the boy would ever be able to use his leg again, also as to whether growth might not be arrested, and the limb be dwarfed later in life. However, this was clearly the surgical procedure indicated, as the limb was perfectly useless in its dislocated condition, and the skin could not hold out much longer. The wound having been dressed, we placed the limb on a back splint with footpiece. There was some coloured discharge from the wound for some time, but never any pus, and union took place rapidly, the remarkable part of the process being that the shortening seemed to disappear. Once in plaster-of-paris, he was able to get about without inconvenience, and ultimately to put his foot on the ground. He was discharged on February 2nd, 1894, with a perfect limb and a fractional shortening, which I have since learnt is disappearing. Dr. Walley writes me on January 24th of this year:—"I saw Bertie's sister a few weeks ago, and she tells me that he walks without a limp, but you can notice a little lameness when he runs." Such a result was hardly to be expected in a case like this, and the reports I have received from Dr. Walley from time to time have greatly reassured my mind with regard to the development of the limb. What seemed an almost desperate case was saved by following sound surgical principles. The splendid nursing of the staff of the Tamworth Hospital contributed largely to the successful result obtained in this unique case, and I take this opportunity of thanking them.

Case No. 2 is that of Charlie W., *et. 12*, who was kicked on the left leg, a hand's-breadth above the knee-joint, on Christmas Day, 1894. He was brought into town from the Watercourse, a distance of sixty miles, with the leg temporarily secured, and I saw him next morning early. Examination of the injured limb showed absolutely nothing but increased mobility laterally and a peculiar, moist crepitus; no pain, absolutely no shortening whatever, and not a trace of hæmorrhage nor swelling. But for the manner in which the foot rolled outwards whenever the leg was let go, it would have been quite easy to say there was very little the matter. A few rotatory movements were sufficient to place the dislocated parts into position. This caused no pain,

and, there being no shortening, a long Liston, with a short inside splint, was deemed sufficient to retain the fracture, and did so most effectually. I had an inclined plane made, meanwhile, and placed the leg upon it a fortnight later, as there appeared a half-inch shortening on removing the straight splints. It was too much to expect that there would be no shortening, yet, on thinking the matter over, one fails to see why, if the dislocated ends are restored to their normal position, there should be any. Four weeks after the injury the boy was able to lift his leg without pain off the bed, so I allowed him up a little later, and he is now (six weeks after the accident) getting about well on crutches. There is no distinct callus to be felt along the course of the femur, and the actual shortening is now less than half-an-inch, which I think will also disappear when the pelvis becomes tilted a little.

It seems to me that all epiphyseal separations are unpleasantly difficult to retain in correct approximation, more so than fractures pure and simple. In the case of the humerus, I have several times observed union whilst the shaft was rotated outwards, and consequent deformity. It seems impossible in that case to get the correct position without wiring the parts together. In case 2 I attribute the shortening to a slight rotation outwards of the shaft of the femur, through the action of the psoas and iliacus when the boy would be raised in bed for nursing purposes. It is needless to add that there was no trained nurse available. The patient lay on a wire mattress, over which I had boards laid, and another mattress made of soft material. Absolute rest, with the appropriate appliances and a skilled nurse, could hardly, however, have brought about a more satisfactory result than was here obtained.

In conclusion, it seems, judging from these two cases, that a separation of the epiphysis of the femur can occur without giving rise to many definite signs or symptoms, and, on the other hand, may be serious enough to necessitate active surgical interference. It appears to be good surgery to remove a piece of the bone if the parts cannot be approximated, and there is no danger of arrest of development incurred thereby. There does not seem to be any callus of consequence thrown out when the fracture has been reduced, and it is probable that immediate union takes place.

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SOME EXPERIENCES OF QUEENSLAND SNAKES.

READ BEFORE THE N. S. WALES BRANCH
B.M.A., BY W. C. C. MACDONALD, M.B.,
CH.M. GLAS., OF INGHAM, NORTH QUEENSLAND.

IN considering the recorded cases of snake-bite that have appeared from time to time in the various journals, including the *Australasian Medical Gazette*, ever since what we might term the "strychnia treatment epoch," one cannot help being struck with the absence of one very important fact from a large majority of the cases, viz., the identification of the particular snake that caused the trouble. I do not wish to be understood for one moment as implying that any want of care has been observed in the matter by those recording cases, as I am deeply conscious of the difficulty, and sometimes impossibility, of gaining accurate information on the subject; but I simply wish to impress on you the very great importance of being able to identify the snake, as this, in the early stages, in my opinion, is the only absolute means we have of diagnosing the case as one of pseudo or real poisoning. In a large number of the recorded cases the snake is alluded to without any further description as being a "black" snake, "brown" snake, "whip" snake or "tiger" snake. Now, as under all and each of the above terms are included several snakes of very similar appearance, but which are harmless, or nearly so, and from the frequency in which they are confounded for each other in every-day life, as anyone of even moderate experience can testify, it is obvious that unless the particular snake is clearly identified the description is misleading and comparatively worthless, and throws a considerable amount of doubt on the whole case.

There is yet another important point that is absent from a large number of the recorded cases, and that is a description of the appearance the part presents after a bite has been given, for it has been abundantly proved in my own experience that even a poisonous snake sometimes inflicts a bite, one exhibiting the characters which are generally considered to be typical (viz., two punctures) from which no results of a dangerous nature ensued. But this leads me to a consideration of the method in which a snake generally inflicts a fatal bite, and, as it is accompanied by marked diagnostic characters which are present in nine cases out of ten, attention to the point will throw a considerable amount of light as to whether or not a fatal bite has been inflicted. I am of the opinion, which is based on experience, that a snake, in order to inflict a fatal bite, must

deliberately seize the part with both jaws and hold on, for a longer or shorter period, like a bulldog, and in every case of such bite you will find the marks of the teeth of the lower jaw, which, as the teeth are very short, has the appearance as if done with a small saw. Sometimes, however, if the snake has only obtained a short hold, you only find the marks of the two front teeth of the lower jaw. Now, in considering what the fangs of a poisonous snake really are—viz., hollow or grooved cylinders for conveying the poison deep into the vascular tissue of the victim—it would be just as probable to assume that a hypodermic injection, say of morphia, could be given successfully by making a wild dash with the syringe without the counter aid of the other hand in steadying the limb. So, too, a snake must seize with both jaws, the lower acting as a fulcrum or counter agent, and it would seem as if a snake does this and holds on, and by a chewing sort of motion of the jaws drives successive doses of poison into the tissue. All the fatal cases I have seen have been done in this way, and the victims described that they had to shake the snake off.

The position, too, which a snake selects in inflicting his bite seems to be done with due deliberation, as it is nearly always a finger or toe, the border of the hand or foot; the tendo-achilles is also a favorite point. I once saw a case where the snake had first attempted to seize the external malleolus, but, having failed to retain his hold, as was evident by the torn cuticle, he fastened on the tendo-achilles immediately above the heel.

Other important characteristics are observed in a properly-made bite, and are especially seen where no cutting, sucking, or scarifying of the part has been done, viz.—the part presents a chewed appearance, and is distinctly cedematous, with more or less swelling; ecchymosis, too, is often present. There is also a continuous weeping from the fang punctures, and should the bite be deep, and from a large snake, blood never ceases to flow. The cedema is a very marked symptom, and is probably due to the direct action of the poison on the immediately surrounding tissue, but whether the ecchymosis is the result of bruising by the jaws, or of extravasation of blood caused by the action of the poison, is an open question.

I have seen several cases where a wound exhibiting only two punctures was made by a truly venomous snake, but where he evidently did not get a proper hold, and no symptoms of poisoning followed. I will quote one in illustration.

I was one day engaged out of doors, some distance from home, when a farmer galloped up and told me he had been bitten on the foot whilst ploughing barefooted in a field. He had killed

the snake. It was a specimen of the black variety with the red belly—*Pseudechis porphyriacus*—about four feet long. The wound, which was on the outer border of the left foot, exhibited two punctures only; not deep, but from which blood had flowed. I washed the wound, scarified and sucked it. I then watched the case from time to time during the remainder of the day, and, no symptoms of poisoning appearing, the man went home. He was a very strong-nerved fellow, but was greatly frightened at first. As time went on, however, his fears gradually subsided.

I will now quote an instance of the tenacity with which a snake holds on, of which I was an eye-witness. Some years ago I was riding in company with the owner of a retriever dog. The latter was running in some long grass near the road, when he suddenly gave two or three yelps and ran out on to the road with a large brown snake (*Diemenia*) hanging to him—it had fastened on to the fore-leg close to the chest—and the dog actively trying to get rid of it. We both dismounted, and managed to strike the snake with the butt of a riding crop, and then only it relinquished its hold. We had no difficulty in killing the reptile, which was a little under six feet long. The dog soon exhibited symptoms of poisoning. I did what little I could. The owner then led it to a lagoon near at hand, and on my returning about an hour and a half later the dog had just died.

From the foregoing remarks it will be seen that the manner in which the bite has been given, together with the physical characteristics exhibited at the seat thereof, must form an important diagnostic factor in dealing with snake-bite.

I may state that during the past eleven years I have seen over sixty cases of bite from various kinds of snake. Of that number not more than six terminated fatally, whilst eight or nine exhibited signs of poisoning in a greater or less degree, but ultimately recovered. The majority, however, were what one might term incomplete bites and bites from non-venomous snakes, and were followed by no poisonous symptoms.

In addition, I have seen a considerable number of bites in dogs and other domestic animals, most of which terminated fatally. This is accounted for by the fact that it requires a smaller amount of poison to kill these smaller animals, and that the less severe cases would altogether escape observation.

It would seem that all snakes having poison fangs bite in the same method, but of the large number of venomous species not more than five species are capable of inflicting a fatal bite to man and the larger animals. Those include the black

red-bellied snake (*Pseudechis porphyriacus*), black or brown orange-bellied snake (*Pseudechis Australis*), brown-banded or tiger snake (*Hoplocephalus curtus*), brown snake (*Diemenia superciliosa*), and death-adder (*Acanthophis Antartica*). The death-adder occupies a position midway between the Australian venomous colubrine snakes and the true vipers. The former have a visibly-grooved movable fang, the vipers having a perforated movable fang; the death-adder possesses a permanently-erect perforated fang. The death-adder enjoys the popular reputation of being the most deadly of all the Australian snakes; but that is an error, it being less venomous than any of the above.

None of the Australian venomous snakes are climbing in their habits, and are never found but on the ground or on places of easy access therefrom. This point is of some diagnostic value in the event of a person being bitten at night whilst opening a gate or in other similar position. You can at once dismiss the probability of a venomous bite from your mind.

I have questioned the blacks on many favourable occasions with regard to snakes and their habits, and have found them accurate and trustworthy observers.

It speaks well for their knowledge that it is a very rare thing to hear of a black being bitten by a venomous snake, although they eat certain of the non-venomous kinds. They have an unutterable horror of the snakes I have mentioned as venomous, and nothing will induce them to meddle with them; and if it chance that a black gets bitten by one of those he is abandoned to his fate, as they regard his case hopeless. They point to certain snakes as being partially poisonous, and know the non-venomous ones.

I will now relate three fatal cases of snake-bite, together with the treatment followed in each case. I will also present you with the circumstances surrounding the cases, in so far as I was able to gather them from the patient and persons present at the time. I have selected the cases, because in each instance I myself identified the snake, and strychnia was pushed until constitutional effects of that drug clearly manifested themselves.

1. A Javanese labourer, aged about 26 years, was brought to me from a distance of four miles in a cart one morning about 7 o'clock. He was in a drowsy, comatose condition, from which he could be partially roused on being roughly shaken and shouted at, but immediately relapsed on being left quiet. It appeared the man had not turned up at muster in the morning, and the overseer, on inquiring the reason, was told that between 3 and 4 o'clock in the morning the man had gone out-

side the hut for some purpose, and on returning told his mates that he had been bitten twice on the foot by a snake. He also said he had struck at the snake with a stick, and thought he had killed it. The man then lay down on his bed, and his mates went to sleep without troubling further. I found that patient, as before stated, in a drowsy, comatose condition, from which he could with difficulty be roused.

His symptoms were loss of power in the limbs, respiration laboured, pulse slow and weak, pupils slightly dilated; a degree of asphasia was noticed—that is, he spoke when roused with difficulty and impaired articulation—whilst a thick tenacious, viscid mucus flowed from the mouth, and caused great uneasiness by collecting in the throat. When roused, the patient complained only of the mucus in the throat, which I relieved from time to time with the finger.

There was a well-marked bite on the tendo-achilles, about an inch above the heel, with the marks of the teeth of the lower jaw on the opposite side of the tendon. The wound was distinctly cedematous, and watery-looking blood continued to exude from the fang punctures. The grip had been secured in a slanting direction, the upper higher than the lower jaw. On the outer malleolus there were two parallel tears in the skin, about a quarter of an inch long, as if the snake had tried to bite there and lost his hold.

Injected 15mn. of a 1 per cent. solution of liq. strychnia, and in 20 minutes other 15. Half-an-hour later, no visible improvement having taken place, I injected 10mn. more. The pulse now improved, getting quicker and stronger. I then, taking the pulse as a guide, at intervals of 25 minutes injected 5mn. doses, until 60mn. in all had been injected. Shortly after the last injection slight tremors appeared in the muscles of the face and extremities; the tremors lasted only a few minutes, and died away. During the time of injecting improvement only took place in the pulse. The symptoms of torpor, loss of power, and viscid mucus got worse, and the respirations were slower and more laboured. One hour from the disappearance of the twitchings I injected 10mn. more liq. strychnia. This was followed in a few minutes by spasms and well-marked jerkings of the muscles of the body and limbs. The spasms lasted intermittently for about seven minutes. No more strychnia was injected.

Failure of breathing now being the chief prominent symptom, I resorted to artificial respiration, and kept it up until the man died at 1.20 p.m., about ten hours and a half after being bitten.

It was a remarkable feature that the heart continued to beat after voluntary respiration had ceased.

The snake that killed this man I afterwards saw. It was found severely wounded, near the spot where he was bitten. It was a specimen of *Hoplocephalus curtus*, or brown-banded or tiger snake, nearly six feet long.

2. A stout, able-bodied Kanaka, about 28 years old, was brought to the Polynesian Hospital about half-past 3 p.m., with the following history:—He was working in the neighbourhood of marshy ground with a gang of firewood-getters. Shortly after 1 p.m. he saw a large black snake (*Pseudechis porphyricus*), and tried to kill it. When wounded, it fastened on the outer part of his right foot, at the base of the little toe, taking a firm hold, from which he had to shake it off. I found a well-marked bite with the wounds from the fangs on the dorsal surface of the base of the little toe, and also two wounds from the teeth of the lower jaw on the outer border of the foot. The punctures of the fangs were about three-quarters of an inch apart, whilst those of the lower jaw were about a quarter of an inch from each other. The skin surrounding the wound from the fangs was cedematous and puffy, with thin-looking blood exuding. The man could walk only with assistance, and if left to himself reeled like a drunken man and lay down. The eyes had a dull, heavy look, with pupils slightly pilated; pulse slow and weak. A certain degree of asphasia was present, and thick viscid mucus collected in the throat and flowed from the mouth.

I injected 15mn. of a 1 per cent. solution of strychnia, and repeated it in 15 minutes. I then kept on injecting, at varying intervals, 5mn. doses, until, four hours after the first injection, I had administered 65mn. in all. Tremors and twitchings of the muscles now appeared. Here again the only effect of the strychnia was on the pulse, which grew stronger and quicker.

The viscid mucus increased from the mouth, and the comatose symptoms deepened. At midnight I again brought the patient under the influence of strychnia by three 5mn. injections at about 15 minutes' interval. The patient could still be roused by violent shaking; he made no attempt to speak, and had difficulty in swallowing, part of the fluid flowing out of the mouth. Between 4 and 6 a.m. I made two 5mn. injections of strychnia, producing distinct muscular twitching after the second. The coma was now almost profound, with the respiration slow and laboured. I now resorted to artificial respiration, and continued it more or less up to the time of the man's death at 9.30 a.m., about 18 hours after the bite.

The heart also in this case continued to beat after respiration had entirely failed. In all, 90 minims of a 1 per cent. solution of strychnia were injected.

Cases were quite free from the suspicion of alcoholic complication.

8. This case differs from the foregoing in the fact that a large amount of alcohol and seven drams of aromat. spirit of ammonia had been taken by the person—in this instance a European.

J.M., aged about 34 years, a native of Ireland, was bitten, about half-past 1 p.m., on the hand by a large brown snake (*Diemenia superciliosa*). He completely lost his head, and neglected immediate remedial measures, which he well knew how to conduct, and it was not until some time after that a ligature and sucking were resorted to. He drank about a bottle of whisky and also about seven drams of spirit ammon. arom. in a dilute form. He was brought to the hospital at 4 p.m. His eyes were heavy and drowsy, and pulse rapid. He was very unsteady in his gait, and could give only an incoherent account of the occurrence, speaking with difficulty. A thick mucus collected in the fauces, and his breath smelt strongly of ammonia. There was a well-marked, complete bite, the fangs having penetrated deeply behind the knuckle of the forefinger, and marks of the lower jaw on the palmer surface of the hand. The part round the punctures was cedematous, and ecchymosis was present. A ligature was tied round the wrist, which had been put on three-quarters of an hour after the bite. I cut the ligature, after having scarified and sucked the wound. There being nothing in the symptoms incompatible with an overdose of alcohol and ammonia, I merely watched the case for some time. On being put to bed, the man soon fell into a deep sleep, which lasted somewhat over an hour. On awakening he seemed quite sensible of his condition, but had great difficulty in talking, and complained of his tongue being thick and the mucus in the throat. He was capable of walking about with a little assistance, and exhibited no great mental anxiety; his pulse was beating strongly, and rather fast. At midnight his pulse was still beating well, with respiration rather laboured; he was lying quiet, with eyes half closed, and could be roused without much difficulty. At 6 a.m. I found he had drunk water two or three times during the night, swallowing with difficulty. His symptoms were much the same, except that marked aphasia was present. He could articulate, but not co-ordinate his words; he signalled for paper, and with a pencil was able to write, in large, shaky text, short, simple sentences, but could not carry on a complicated process of reasoning. He continued to try to write during the fore part of the day,

gradually growing more hazy, and his last attempts were mere illegible scrawls. Between 6 and 9 a.m. the symptoms grew worse and developed loss of muscular power of the limbs to a more marked extent; he was now unable to walk. At 8 a.m. I drew off his urine—about eight ounces. Between 8 and 12 (noon) I injected 40mn. of 1 per cent. solution of strychnia, and between 1 and 5 p.m. 45mn. more, the last injection of 5mn. causing distinct tremors and spasms of the muscles. The comatose symptoms gradually deepened until 6 p.m., when he was totally unconscious, and pupils insensible. The heart was beating well, but the breathing was very laboured, a distinct, long interval occurring between each respiration. I kept up artificial respiration until 8 p.m., when the man died, 32 hours after bite. Eighty-five minims of 1 per cent. strychnia were injected. Here also respiration was the first to fail.

I will now relate a case of pseudo-poisoning. One night, about 9 p.m., a man named A. G., came galloping on horseback from a distance of three miles to my house, and staggered into the surgery. He stated he had been bitten on the foot by a brown snake, and immediately collapsed on the floor. His face was pale and anxious-looking, with beads of perspiration on his forehead. His hands were cold, pulse rapid and weak, although the symptoms were quite compatible with those of a swoon; still, taken in connection with the circumstances, they were alarming. The bite was on the outer border of the foot, and presented two punctures, with some scratchings of the cuticle below them. On repeatedly rousing him, and asking if he was sure of the kind of snake that had bitten him, he, after some delay, pulled a tin cannister out of his pocket, and said the snake was there. I found it to contain a brown-coloured snake about two and a-half feet long, and which I recognised as a specimen of *Herbertophis Plumbeus* (Macley), a non-poisonous variety. I gave the man two drams of sal volatile, but it was some time before his mind could grasp the fact that he had been bitten by a harmless snake. The man afterwards told me that whilst riding along he could feel, as he said, the poison creeping up his legs, and his great fear was that he would fall off his horse.

For convenience, snake-bites may be divided into two kinds—complete and incomplete.

Signs of *complete bite* are: Marks of the teeth of the lower jaw, in addition to the two punctures; a history of the snake holding on for a longer or shorter period; cedema in the tissues surrounding the punctures; ecchymosis and bleeding or oozing from the fang punctures.

Incomplete bites may represent anything inter-

mediate between two punctures and mere scratches of the cuticle. The presence of cedema in an incomplete bite would point to some poison being injected, which might be enough to cause symptoms, but in my opinion not enough to cause death in an adult.

Thus, with snake poison, as with opium and other poisons, we may have varying degrees of poisoning, according to the dose.

Under this head, I have little doubt, are included many of the recorded recoveries under various methods of treatment.

A few words with regard to treatment. As in 90 per cent. of the cases the bite is either on the hand or foot, few persons cannot be in such a destitute condition as to be without the means of his own salvation, and that is a ligature promptly and properly applied. A pocket-handkerchief, necktie, or piece off the shirt, if tied tight enough so as to stop arterial circulation, is nearly always available and sufficient. Then scarify deeply, and suck the wound.

Now with regard to sucking the wound. In all the directions in books, and those issued to the police and schools, the recommendation to suck the wound is accompanied by a fatal caution, viz.:—"If the mouth be free from wounds or scratches." Now, this caution is absolutely absurd, as anyone can readily test for himself on the back of his hand, and by considering the mechanism at work. When a part is sucked the pressure is equal all round, and results in the saliva of the mouth and the material from the part sucked collecting in the hollow of the bent-up tongue, from which it can be instantaneously ejected. It would be a mechanical impossibility, even if the whole surface of the mouth were raw, for any material from the wound to find its way into the tissues during the act of suction. So that the directions should read—"Suck the bite vigorously on every occasion, whether the mouth have scratches or not, as no possible harm can ensue."

I am thoroughly convinced that if a ligature be properly applied within four minutes (and possibly much longer) of receiving a bite, and the part scarified deeply and vigorously sucked, no symptoms dangerous to life would follow.

I have seen several cases where a complete bite had been given by a *truly poisonous snake*, and where the above measures had been promptly applied, with no symptoms of poison following.

A point on which I would like to lay great stress is the necessity of ascertaining the nature of the bite before beginning the injection of strychnia hypodermically. There is a widespread tendency to its indiscriminate use whenever a supposition of snakebite arises. Now, persons

really under the influence of snake-venom are exceedingly tolerant of strychnine, and hence, in such cases, large and repeated doses have been advocated. But should it transpire that the case dealt with be one of pseudo-poisoning, and the same large doses administered, dangerous, or even fatal, results might follow. As to the action of strychnia in snakebite, my experience is that it is useless where a lethal dose of poison has been received. In such cases the only result I have seen is strengthening of the pulse.

I have noticed nothing in the use of strychnia that could not be brought about equally well by other less-dangerous stimulants. At any rate, that is my opinion. I regard the whole subject of snakebite, taken in its widest sense, as only in its infancy, and this paper a very humble addition to the knowledge. The whole literature on the subject is full of contradictions, which can only be cleared up by the combined accurate observation of medical men all over the colonies.

Situated as the Australian colonies are, in the very hotbed of snake-venom, the whole world looks to them for information on the subject, and I feel sure that if the subject were only taken up in earnest and suitably encouraged by the various university authorities, the world would not have to wait long!

A CASE OF ABDOMINAL TUMOUR IN A WOMAN.

(Read before the Queensland Medical Society.)

By A. Y. FULLETON, B.A. SYD., L.R.C.P.
LOND., M.R.O.S. ENG.

THE case which I venture to bring before your notice is the following:—

Mrs. B., a primipara, aged 35, a strong, healthy woman who had always lived an active life, was delivered of a child on December 8, 1893, in Sydney. The labour was of long duration, but not more so than might be expected in a mother of that age. It was completed with the aid of forceps and an anæsthetic. There was an extensive laceration of the perinæum. For the next three days, in spite of frequent douches of weak perchloride solution, there was some elevation of temperature. The temperature never rose above 101.5°. The third day the temperature was 100° in the evening. On the fourth morning I stitched up the perinæum. For the next few days there was slight nocturnal elevation of temperature, but at the end of ten days she was apparently quite well, and I ceased to visit her.

About three weeks later Mrs. B. came to see me at my house. She complained of pain in

the lower part of the abdomen, and said she could feel a lump there. On palpating the abdomen, a rounded mass could be felt in the middle line, apparently coming up from the pelvis. On questioning her, I learnt that micturition was painless and normal, and that she had emptied her bladder shortly before I saw her. I had not time to carefully examine her then, but, feeling sure that it was a case of subinvolved uterus, I prescribed an ergot mixture, and sent her home to bed.

Two days later her husband came in and asked me to call and see her, inasmuch as the pain was worse and the lump bigger. On examination, there was no doubt that the tumour had slightly increased. It was now fully three inches above the pubes. On bimanual examination, it became evident that it was not the uterus, but a mass springing from the left of the uterus, and pushing the uterus over to the right.

After a certain amount of trouble I introduced the sound. It entered to a distance of four inches, which was probably a normal distance after the lapse of six weeks from delivery.

The mass had a smooth, hard, elastic feeling, with no irregularities whatever. It was immovable, and attached to the anterior abdominal wall. I thought it was a large hæmatocele between the layers of the broad ligament. But, on the other hand, the steady increase in size did not seem consistent with this theory, neither did the smooth, unchanging outline of the mass. The pain was constant, but not severe. The patient was fairly comfortable so long as she lay supine. I watched the tumour for a fortnight; and then, as there seemed to be no decrease, but rather a slight increase, in size, I asked the husband to call in another practitioner, in order that we might have a consultation. The next day I met Dr. McCarthy, and he thought it either an hæmatocele or cellulitis, and inasmuch as there was no fever and no laceration of the cervix, preferred the former diagnosis. He agreed that an incision be made into the mass in order to clear out the blood clots. The husband declined the operation, but a few days later arranged that Dr. Foreman should meet Dr. McCarthy and myself. Dr. Foreman had no hesitation in diagnosing cellulitis, and agreed in thinking that an incision should be made into the mass. On March 1 1894, with the patient under ether, an incision was made through the anterior abdominal wall. After cutting down to a considerable distance a small cavity was reached in which was what appeared to be a decolorized blood clot. A large drainage was introduced, and the cavity left to granulate up. The wound was washed out twice

a day with iodine solution. At the end of 10 days the tube was removed.

At the end of a month there was no decrease in the size of the mass, and a small sinus remained, from which there was a constant discharge of pus. This went on for another month, when I proceeded to lay the wound open again, but did not discover any cause for the failure in healing. The patient would not, without an anæsthetic, permit me to make as free an opening as I should have wished.

The next day the husband called to see me, and demanded in a very angry tone an explanation of the presence of a mass of coarse yellowish-brown hair in the wound.

The explanation of the mystery was at once evident, but it took a great deal of explanation to convince the husband, who was an Irishman, that there had been no mal-practice in the case. In fact, it was not until he had interviewed his countryman, Dr. McCarthy, that his wrath was appeased.

I got a considerable quantity of coarse hair and cheesy matter out of the cavity, and in a few weeks the whole cavity granulated up.

I heard from the husband last December, and he said in his letter that his wife was quite well, and that the swelling had shrunk to a very small size.

The possibility of the mass being an hæmatocele, rather than cellulitis, seemed likely to me for the following reasons:—1. There was no apparent laceration of the cervix, the head having been low down on the perineum, and the os fully dilated before the application of forceps. 2. The fact that delivery took place under strict aseptic precautions.

On the other hand, the result of the operation was exactly what one might have expected in the case of a dermoid.

I believe the rapid growth of a dermoid of the ovary is often attended by cellulitis of the neighbouring tissues.

No doubt the exploratory incision was made into the inflamed tissues immediately in contact with the cyst wall.

Of course, had a correct diagnosis been made, the question of laparotomy would have arisen.

For my own part, where the adhesion between the cyst wall and the abdominal wall seems firm, I should prefer to incise, evacuate the contents, and leave the cavity to granulate up. I have had the good fortune to examine two women with dermoid cysts of the ovaries. I may say in both these cases there was a pedicle, the tumour being freely movable; but I must admit in this case the diagnosis never entered my head, although the tense, smooth mass should have suggested it.

THE ANTI-TOXIN TREATMENT OF DIPHTHERIA.

BY H. C. GARDE, F.R.C.S., SURGEON TO THE
MARYBOROUGH HOSPITAL, QUEENSLAND.

THE following short notes of six cases of diphtheria treated with anti-toxin, combined with general treatment, may help in some small degree to elucidate the effect it has on the disease in this climate.

CASE 1.—Frederick J., aged four years, complained of pain on attempting to swallow on April 3rd; next day Dr. Luther was called to see the child, and gave iron and mercury internally, with local application to the throat. On the evening of April 5th I saw the case with him in consultation; the breathing was so much obstructed, face bluish in colour, and sternum dipping to such an extent that it was decided to open the trachea at once. While under the influence of the anæsthetic, a full dose of Behring's anti-toxin was injected, and he was then wrapped up and conveyed to the hospital for further treatment, as, through various reasons, there was no chance of his getting properly looked after where he was. Both tonsils and the back of the pharynx were covered with membrane, and there was a slight amount of albumen in the urine. Immediate relief followed the introduction of the tube, and he spent a fair night; temperature, 102°. He improved steadily, and although at time of writing he is still unable to dispense with the tube, yet he runs about, and is in all other respects quite strong.

CASE 2.—Edward C., aged five years; admitted into the hospital April 26th; right tonsil and portion of left palate covered with membranous patches; respiration harsh and rapid; temperature, 101°. Got steadily worse until April 28th, when trachea was opened at 6 p.m., with prompt relief to his breathing. On April 29th I obtained a supply of anti-toxin, supplied by the Queensland Government from the British Institute of Preventive Medicine, and which I shall call Ruffer's anti-toxin; and at 2 p.m. 15ccm. was injected under the skin of abdomen. No albumen previous to injection; both temperature and pulse went up slightly same evening; had a fair night. April 30th, at 9.30 a.m., injected 10ccm. of anti-toxin; there was slight albumen present; improved steadily. May 4th, a rash on right side of body and limbs, which disappeared on May 5th; rash resembled urticaria in character; tube removed on May 10th, and discharged on May 21st, well, in good health.

CASE 3.—Kathleen H., aged three years; complained on May 3rd; usual signs and symptoms of diphtheria; improved on May 4th, but had a bad night, and on May 5th breathing was laboured. At 11 a.m. 10ccm. of Ruffer's anti-toxin were injected; pulse and temperature both high. Had a bad day. At 11 p.m. a second injection of 10ccm. was given; she improved slowly, and on May 8th had a relapse, when a further 10ccm. was injected. She gradually got better, and for some time past has been able to get about all right.

CASE 4.—William C., aged four years. On May 3rd he was admitted; temperature 98.8°, breathing difficult, pulse fast. At 2 p.m. injected 15ccm. of Ruffer's anti-toxin. Breathing got steadily worse until 6.30 p.m., when tracheotomy was done, with prompt relief to his breathing; had a good night. May 4th, at 10.10 a.m., 10ccm. more was injected. He steadily progressed; tube removed on May 8th, or five days after the introduction of it. He was fit for home on the 15th, but his parents, who lived at a distance, were unable to send for him until May 22nd.

CASE 5.—Sarah A. B., aged seven years; was ad-

mitted on May 20th. She had been ill for some time previous, and was in a low state. The whole of the soft palate, tonsils, and pharynx were covered with thick membrane, and a bad-smelling, purulent discharge poured from the nostrils; the latter were syringed with a strong solution of borax, and the throat frequently swabbed with equal parts of sulphurous acid and water. On May 21st breathing became much worse, and at 6 p.m. tracheotomy was done and the breathing relieved; at the same time 15 ccm. of Ruffer's anti-toxin were injected at usual place. Temperature was then 102.4°. She steadily got worse, and died at 3.50 a.m. on May 22nd.

CASE 6.—Mary N., aged two and a-half years. Admitted May 22nd; only slight patch on left tonsil, but the respiration was laboured and dry; temperature 102.2°; no albumen. At 6.30 p.m. 10ccm. of Ruffer's anti-toxin was used. Temperature gradually fell to 99.2° at 5 a.m. on May 23rd. She went on well, and left the hospital on May 29th.

REMARKS.—Perhaps the above notes are too short, but I see little use in recapitulating symptoms which, unfortunately, are only too familiar to us all. At the same time, I desire to place before you the impressions left in my mind as the result of my own observation of the above few cases, uninfluenced to any degree by what I have read in various medical journals by enthusiastic advocates of a remedy which, I am led to believe, will, in certain carefully-selected cases, become a factor of considerable value, but, if used in all cases by rule of thumb, will only lead to disappointing results. The only effect which I found the anti-toxin to produce in the way of relief was the loosening of the membrane, and an increase in some of the cases to a great extent of secretion in the trachea and perhaps larger tubes. In case No. 5, the only fatal one of the lot, in which the secretion was already profuse, I failed to see that it was productive of good, and it may possibly have increased the already depressed condition she was in. No. 6 was a mild case, but the others were severe, as evinced by the fact of tracheotomy being absolutely necessary to prevent them from suffocating in four out of the five first mentioned. In all in which the operation was done, immediate relief followed, and it is a difficult question to decide, and one which I have not seen mooted in print previous to now, to which remedy, viz., anti-toxin or tracheotomy, is the greater credit due? For my own part, judging from past experience, as well as from the fact that in a great number of the cases reported either intubation or tracheotomy had to be done, in a large proportion of anything like *severe cases* occurring in young children, say *five years and under*, if I was restricted to the use of either, I certainly should prefer tracheotomy. So, while fully recognising the value of anti-toxin, as I said before, in carefully-selected cases I fail to see that any good will be done by its indiscriminate use in mild cases, which nearly always get well by the usual treatment, and with which the columns of medical journals are filled as a proof of the wonderful efficacy of anti-toxin.

During the period in which those six cases occurred, several others of a milder type were treated successfully in the usual manner. We all have our own particular fancy, but I take it that the local applications of some reliable antiseptic, with iron in some form internally, and general attention as to diet, stimulants, &c., &c., will meet the requirements of a large proportion of ordinary cases.

It is in the severe type of disease that the battle of anti-toxin versus intubation and tracheotomy has to be fought out, and up to the present I have seen nothing to shake my belief in the real good of

tracheotomy in the worse forms of diphtheria. I am satisfied that, if I had not resorted to tracheotomy, all the cases in which I have performed it would have died.

June 1st, 1895.

CASES OF DIPHTHERIA TREATED WITH ANTI-TOXIN AT THE HOSPITAL FOR SICK CHILDREN, BRISBANE.

BY L. N. ASHWORTH, M.B., RESIDENT SURGEON.

THESE cases are in continuation of a series published in the March number of the *Gazette*. Except in one instance the bacteriological examinations were made by Dr. Love in conjunction with Mr. Pound.

CASE 7 (under charge of Dr. Wilton Love).—H. M. D., aged five years, admitted February 23, 1895. Child has been ailing four days; no complaint of sore throat. Dyspnoea first noticed yesterday evening, 5 p.m. Child is well nourished; good colour, lips red, breathing noisy; at times she gets paroxysmal attacks of dyspnoea, two, three, or more in an hour, which are for the time very distressing, probably due to cedema of glottis. T., 99.4°. Tonsils and uvula are covered with pale, thick membrane, which is creeping forward on soft palate. Tonsils are greatly swollen, so that they meet, and leave very little air-way. Glands under both angles of jaw much swollen; hoarseness slight, but perceptible; mxx. of Aronson's anti-toxin were injected hypodermically, and the usual treatment continued. At 9 p.m. there was orthopnoea; T. 100.8°, P. 140, R. 26. At about midnight tracheotomy was performed. T. 99°. The temperature rose rapidly after this, and by 3 a.m. on February 24 it had reached 104°; P. 140, R. 80. She was then packed for almost two hours, and the temperature did not rise to 103° again till noon.

February 24.—Child breathing easily; colour a little bluish. Tonsils, uvula and soft palate are one sheet of yellow, sloughy-looking membrane. Nothing to be made out in the lungs; no albumen in urine. 3 p.m., T. 103.6°, P. 130, R. 36; moist sounds audible all over lungs. At 6 p.m. 20cc. of solution of B. I. P. M. dried serum was injected. By 2 a.m. on February 25 temperature had risen to 105°, pulse 200, respirations 60. At 6 a.m. she had a temperature of 104.8°, respirations 80; pulse was uncountable, and her complexion was livid. She died about half-past six on February 25. Diphtheria bacilli found on bacteriological examination.

CASE 8 (under charge of Dr. Peter Bancroft).—J. D., aged four years. Admitted March 3, 1895. Child has been ailing two days, the commencement being like croup; dyspnoea for two days. T. 98.4°, P. 152, R. 32. One very small yellow patch on posterior wall of pharynx; much dyspnoea, some stridor, recession of epigastrium on inspiration; colour good; she was intubated almost at once. There was no albumen in the urine, and at 3 p.m. 20cc. of watery solution of B. I. P. M. dried serum was injected. Temperature remained about 100° or 101° for the next four days, the case being fairly uneventful.

May 7.—11 a.m., T. 102°, P. 140, R. 49. Pharynx clean; moist sounds all over chest, probably transmitted from trachea. This being the fourth day from intubation, the tube was removed.

Dyspnoea then very rapidly ensued, and there being some difficulty with the intubation instrument the child grew so bad that tracheotomy was on the point of being resorted to, when, improvement being noticed, the intubation instrument was set right and the tube at once re-inserted. Temperature at once rose after this,

and continued up for some days. A little albumen was noticed in the urine.

March 11.—9 a.m., T. 100.8°, P. 118, R. 39. Tube was again removed, and did not need re-insertion. From this time the case was uneventful, and was discharged on March 26. Diphtheria bacilli *not* found, but plenty of streptococci, diplococci, &c.

CASE 9 (under charge of Dr. Lockhart Gibson).—K. M., aged seven years ten months; admitted March 8, 1895; complained of headache and sore throat exactly a week ago, and has been getting worse since; colour is fair, but there is slight tendency to cyanosis; there is slight stridor on breathing, which her mother states has been noticeable since yesterday morning; T., 99.4°. Both tonsils, anterior pillars of fauces, and posterior wall of pharynx are invaded with membrane; also a thick yellow sheet of membrane extends up from left tonsil over left side of soft palate. There is also a discharge from the nose. The usual medicinal treatment was adopted. Urine acid, sp. gr. 1032; albumen, nearly one-third. By 9 p.m. the difficulty in breathing had increased so much that she was intubated; T. 101.2°, P. 124, R. 16.

March 9.—9 a.m., T. 102.8°, P. 129, R. 35; albumen in urine, nearly one-half; child is more pallid; membrane is very extensive; still recession of chest-walls on inspiration; another 20cc. of watery solution of B. I. P. M. dried serum injected.

March 10.—9 a.m., T. 101°, P. 142, R. 40; urine acid, sp. gr. 1040, albumen seven-eighths; membrane more swollen and macerated. Another 20cc. of solution of B. I. P. M. dried serum injected.

March 11.—9 a.m., T. 100.4°, P. 128, R. 36; albumen three-fourths; throat still very foul, but distinctly clearing; another 10cc. of solution of B. I. P. M. dried serum injected.

March 12.—9 a.m., T. 100.2°, P. 108, R. 26; urine xvi. in twenty-four hours; acid, sp. gr. 1030; albumen half. Throat slowly clearing; vomited once during night; still some discharge from the nose; another 10cc. of watery solution of B. I. P. M. dried serum injected.

March 14.—9 a.m., T. 99.4°, P. 108, R. 28; urine xix. in twenty-four hours; albumen one-tenth. Throat clearing well; intubation tube removed; child breathed easily afterwards. On March 16 the urine fell to xvi. in twenty-four hours, but after administration of liq. ammon. acet. in good doses it gradually rose in a few days to a reasonable amount. The throat was not clean till March 25, the fifteenth day after admission to the hospital, and, as estimated, the twenty-second day of the disease. Some paralysis of the soft palate later developed, but she was discharged cured on May 3, eight weeks after admission. Diphtheria bacilli found on bacteriological examination.

CASE 10 (under charge of Dr. Hardie).—S. J. D., aged five years and ten months; admitted March 12, 1895. The boy has been ailing four days; he has been under treatment outside; boy is fairly well nourished, good colour, no recession of chest; T. 103.4°, P. 152, R. 38; tongue thickly furred. There is a large patch of membrane over both tonsils, extending up to the soft palate; tonsils swollen to meeting; uvula also swollen; glands about angles of jaw enlarged; heart clear; lungs no dullness; tubular breathing at right apex posteriorly; some rhonchi and also occasional big moist sounds may be heard in chest, probably transmitted from the trachea; much discharge from the nose, which is blocked; much mucus in the mouth; albumen in urine. 6 p.m., T. 104.2°; 20cc. of solution of B. I. P. M. dried serum injected. By 7.45 p.m. the breathing was difficult, so he was intubated, and

received considerable relief therefrom. Dyspnoea, however, again supervened about 11.15 p.m., this time, apparently, due to the swollen condition of the soft parts in the throat; so between midnight and 1 a.m. tracheotomy was done, recovery from chloroform being very slow. The temperature then at once began to rise. At 3 a.m. temperature was 104°; at 9 a.m. 104°, and it remained high to the end, in spite of all measures employed.

March 13.—9 a.m., T. 104, P. 160, R. 42. Albumen one-sixth. Throat cleaner than yesterday. Another 16cc. of solution of B. I. P. M. dried serum injected. At 5 p.m. moist sounds were audible over both lungs, and fine crepitations over the middle of the left lung posteriorly. At 5 p.m., T. 104°2', P. 168, R. 46; 5cc. of Aronson's anti-toxin were injected.

March 7.—3 a.m., T. 105°, R. 48, pulse uncountable. Boy died at 3.15 a.m.

Diphtheria bacilli found on bacteriological examination.

CASE 11 (under charge of Dr. Wilton Love).—M. J. D., aged two years five months; admitted March 15, 1895. Child is sister to case 7. She has been under medical treatment for two weeks with swollen tonsils. Mother noticed a white patch on the throat yesterday.

9 p.m.—T. 98°6', P. 108, R. 28, easy, natural. Tonsils swollen and injected. On the right side is an oval hollow, rather larger than a shilling, coated with adherent membrane. There is a projecting piece of yellow membrane on the left tonsil. One bottle of Behring's No. 1 serum (600 anti-toxin units) injected under skin of abdomen.

March 16.—9 a.m., T. 98°6', P. 104, R. 22. Albumen in urine; patch on left tonsil is now a mere streak. Very slight blush at site of injection.

March 17.—T. 99°8', P. 110, R. 21; urine acid, sp. gr. 1030; albumen; left tonsil clean, right much cleaner. Small patch on uvula and on soft palate.

March 18.—9 a.m., T. 100°2', P. 116, R. 24; albumen one-fifth; very little patch on right tonsil, also on uvula.

March 20.—9 a.m., T. 98°4', P. 94, R. 26. Urine acid, sp. gr. 1015; scarcely a trace of albumen; total in 24 hours, 3xiii ss.; very faint patch on left side of root of uvula.

By March 22 the throat was clean, and the girl was discharged April 7, 1895.

Diphtheria bacilli found on bacteriological examination.

CASE 12 (under charge of Dr. Peter Bancroft).—W. S. J., aged two years three months; admitted March 16, 1895. Four days ago the boy complained of sore throat. 7 p.m.: Boy has fair colour; lips red; breathes through mouth; sounds a little hoarse; some discharge from the nose; foul smell on the breath; glands under both angles of the jaw much swollen. T. 100°6', P. 124 (regular, full, not compressible), R. 24; no recession of ribs; tongue a little furred. There is a large, thick, yellow patch on the right tonsil, extending up towards uvula; punctiform red rash over right side of chest. One bottle of Behring's No. 1 serum (600 anti-toxin units) was injected under skin of abdomen.

March 17.—9 a.m., T. 99°4', P. 124, R. 28. Urine acid, sp. gr. 1020; albumen; some hoarseness; foul smell from mouth; sanious discharge from nose; patch still on right tonsil.

March 18.—9 a.m., T. 100°8', P. 116, R. 26. Foul blood-stained discharge from both nostrils; lips cracked and bleeding; patch still on right tonsil; smell from mouth almost intolerable. At 10.15 p.m. another bottle of Behring's No. 1 serum was injected.

March 19.—9 a.m., T. 98°, R. 24. Urine, total sup-

pression, none passed since 11 a.m. yesterday; much vomiting during night, chiefly of brownish fluid; petechiae about face; blood-stained discharge from nose and mouth; became unconscious, and died about noon.

Diphtheria bacilli found on bacteriological examination.

CASE 13 (under charge of Dr. J. Lockhart Gibson).—V. M. W., aged six years; admitted March 26, 1895. Ailing for three days; complained of sore throat this morning. T. 100°6', P. 132 regular, and somewhat compressible, R. 16. Tongue moist, slight fur; no hoarseness; both tonsils and walls of pharynx have patches of membrane on them, but only patches. One bottle of Behring's No. 1 serum (600 anti-toxin units) injected beneath skin of abdomen.

March 27.—9 a.m., T. 98°4', P. 94, R. 23. Urine, no albumen; amount in 24 hours, 3xxvii.; tonsils and pharynx still patchy; a trifle hoarse.

March 29.—9 a.m., T. 98°6', P. 74, R. 17. Urine acid, sp. gr. 1020, no albumen; in 24 hours passed 3xxix.; still some specks on the tonsils and pharynx.

Thenceforth, the case has been uneventful, though the throat was not clean until April 5. She was discharged from the hospital on April 25.

Diphtheria bacilli found on bacteriological examination.

CASE 14 (under charge of Dr. A. J. Turner).—F. W. P., aged six years one month. Admitted April 11, 1895. Boy began to complain of sore throat exactly a week ago, though he seemed somewhat unwell for four days previously. Dyspnoea came on yesterday about midday, and has steadily increased since. Boy has fair colour, and is fairly nourished. T. 98°4', P. 140 regular, full, not compressible, R. 20; some stridor, variable in intensity, also recession of ribs at times; apparently some spasm, or else temporary increased blocking of air-passages by mucus, as it may be relieved by a cough; tongue clean, moist; glands at angles of jaw a little enlarged, most on the right side.

Left tonsil has one large and some smaller patches on it, also the left wall of pharynx, also the right side of posterior wall of pharynx, also the right tonsil.

Heart clear; lungs, sounds masked by stridulous breathing, percussion fair anteriorly, posteriorly in favor of left side.

The boy was put to bed and given steam and the usual medicinal treatment. At 8.30 a.m. there was sudden obstruction to breathing and asphyxia; intubation and artificial respiration gave quick relief. The tube came up again in about 20 minutes, but the relief continued. One bottle of Behring's No. 2 serum (1000 anti-toxin units) was injected into subcutaneous tissue of abdomen. Epiglottis looked much swollen. 4.30 p.m., intubated again; 8 p.m., T. 100°, P. 120, R. 20; no blush and very little swelling at site of injection.

April 12.—9 a.m., T. 99°8', P. 120, R. 21; boy seems fairly comfortable; right tonsil seems clean; left has more membrane on it, also the pharynx; lungs have dulled sounds, but seem clear; urine, 3xiv. in 24 hours; a trace of albumen.

Another bottle of Behring's No. 2 serum (1000 units) injected.

April 13.—T. 99°4', P. 112, R. 19; still a few specks on left tonsil and side of pharynx; throat otherwise seems clean; intubation tube coughed up during examination; breathing easily; no rash about body; urine, 3xvii. in 24 hours.

April 15.—T. 99°4', P. 86, R. 19; urine 3xii. in 24 hours.

April 16.—T. 99°2', P. 88, R. 18; throat clean; urine, 3xxi. in 24 hours; no albumen.

Henceforth he made an uninterrupted recovery, and was discharged on May 2, 1895.

Diphtheria bacilli found on bacteriological examination.

CASE 15 (under the charge of Dr. Love).—R. H. L., aged one year one month; admitted April 14, 1895. Boy had a slight cold for about a week; no cough; hoarseness began two days ago; cough began yesterday; dyspnoea began last night, and has got steadily worse since. T. 100° 8', P. 122 regular, fairly full, not compressible, R. 21 noisy; recession commencing; breathing is somewhat stridulous; cough croupy; glands at angles of jaw swollen; both tonsils are swollen; right is covered with a whitish sheet of membrane; there is also a patch on right side of pharynx; heart clear; lungs apparently clear, but auscultatory sounds are masked by transmission of sounds from larynx and trachea; percussion gives a good note. Boy was put on the usual medicinal treatment. 3 p.m., T. 99° 6', P. 124, R. 23; intubated; one bottle of Behring's No. 1 serum injected subcutaneously on left side of abdomen, at least 500 anti-toxin units.

11 p.m.—T. 100°, P. 126, R. 42; still slight recession of chest wall; plenty of moist sounds audible in lungs, probably transmitted from tube and trachea; breathing quietly; diarrhoea, stools very offensive.

April 15.—Tube coughed up about 5.30 a.m.; re-inserted at 8.30 a.m. 9 a.m., T. 101° 2', P. 130, R. 36; right tonsil still coated, some membrane on left; tongue much coated; another bottle of Behring's No. 1 serum (600 units) injected. April 16.—10 a.m., T. 98°, P. 100, R. 24; coughed up tube about 2 a.m.; breathing fairly since, noisy at times, with slight recession; thick sheet of membrane still on right tonsil; tube was re-inserted about 9 p.m., and coughed up again about midnight.

April 17.—Throat almost clean; a little membrane on some abrasions on lips and tip of tongue; still slight recession; child's breathing was variable during night, at times distinctly bad; trace of albumen in urine.

April 19.—9 a.m., T. 99° 8', P. 122, R. 32; tonsils are clean, but membrane is present in patches on soft palate and half-way along the hard palate, also on lips.

April 27.—9 a.m., T. 98° 4', P. 80, R. 19; mouth is practically clean. Henceforth he made an uninterrupted recovery, and was discharged on May 4, 1895.

All through this case was most difficult to keep satisfactorily warm; his extremities used to get so cold that he needed hot bottles nearly the whole time that he was in hospital.

Diphtheria bacilli found on bacteriological examination.

CASE 16 (under charge of Dr. P. Bancroft).—D. S. E., aged one year eight months; admitted April 17, 1895, about 2.30 p.m.; girl had been ailing about a week, seemingly with a cold; complained of sore throat, also tickling on swallowing. Dyspnoea came on yesterday morning, and has steadily increased since; much recession of chest wall on inspiration; child was cyanotic on admission; heart clear; lungs, anteriorly no adventitious sounds, posteriorly no dulness, but moist sounds are plentiful at left base, and at times at right base, but at times right base seems clear; glands at angle of jaw swollen, especially on the right side; no membrane visible in the throat; some patches on an abraded surface on right side of cheek, inside mouth; an abraded and indurated surface on inside of mouth on left side. Child seems to bring up almost pure pus when tongue is depressed with a spatula for examination of throat. Swabbing taken for bacteriological examination. T. 104°, P. 200, R. 72; intubated at once. One bottle of Behring's No. 1 serum (600 anti-toxin units) injected under skin of abdomen.

Given usual treatment, with free stimulation, but she sank and died within three hours.

Diphtheria bacilli found on bacteriological examination.

CASE 17 (under charge of J. Lockhart Gibson).—A. J. H., aged four years; admitted April 18, 1895. Girl has been ailing about a fortnight; mother states pieces of flesh have been coming from her nose for a week past; child is in very good condition, good colour, and well nourished. T. 98° 4', P. 116 (regular, fairly full, not compressible), R. 20 (easy, and without any obstruction); heart sounds clear; lungs clear; glands under angles of jaw enlarged, especially on the left side; throat clean. In right nostril may be seen some white membrane on septum nasi and inferior turbinated bone. She was put on small doses of Fellows' syrup, and had her nose syringed with weak Condy's fluid every three hours. At 5.30 p.m. one bottle of Behring's No. 1 serum (600 anti-toxin units) was injected under skin of abdomen on left side. Urine acid, sp. gr. 1030; no albumen. At 7 p.m. there was no swelling, hardness, or blush at site of injection.

April 18.—9 a.m., T. 98° 8', P. 92, R. 20. Trace of albumen in urine; membrane in nose is less.

April 19.—9 a.m., T. 99°, P. 92, R. 20. No albumen in urine.

April 24.—T. 100° 4', P. 86, R. 19. Nose clean.

Henceforth the case progressed satisfactorily, though always running a slight temperature some time during the day. She was finally discharged on May 8, 1895.

Diphtheria bacilli found on bacteriological examination.

CASE 18 (under charge of Dr. P. Bancroft).—I. W., aged two years; admitted April 22, 1895. Girl said her tongue was sore two days ago; there was a little croupy cough yesterday; last night dyspnoea came on, but improved, and by morning she seemed fairly well, but since commencing her journey hither (20 miles) it has become much worse again. Breathing is now noisy, and there is much recession of chest walls on inspiration. Child seems well nourished; colour fair. T. 102° 2', P. 180 (regular, variable in quality, compressible), R. 44. Tongue coated with thick white fur; lungs clear; heart clear; throat clear. She was placed in the isolation ward, and treated with steam and an expectorant mixture, as if for catarrhal laryngitis. At 11.45 a.m. breathing had become so difficult that intubation was resorted to, the string, as usual, not being removed from the tube.

April 23.—About 1.45 a.m. the child suddenly choked, and became asphyxiated. The nurse promptly withdrew the tube, and the child was relieved for the time, but respiration gradually became impeded again, and at 6.30 a.m. the tube was re-inserted. The throat was now still clean, but some scraps of distinct membrane came up on intubating, so one bottle of Behring's No. 1 serum (600 anti-toxin units) was injected, and the child sent to the diphtheria ward. 9 a.m., T. 100° 6', P. 140, R. 30.

April 24.—Slight and somewhat doubtful patch on left side of root of uvula, and on margin of left tonsil; some diarrhoea. 9 a.m., T. 100° 4', P. 114, R. 22. 5 p.m., T. 103° 8', P. 148, R. 44; sponged for 30 minutes.

April 25.—T. 99° 8', P. 128, R. 29; throat clean; coughed up tube about 9 a.m.; very hoarse; breathing sounds very dry; only a trace of recession of ribs, but distinct sound of obstruction to free passage of air.

April 28.—Urine acid, sp. gr. 1012; no albumen. Henceforth she made an uninterrupted recovery, and was discharged on May 9, 1895. Diphtheria bacilli found on bacteriological examination by Dr. A. J. Turner.

CASE 19. (under charge of Dr. A. J. Turner).—A. F. F., aged five years and one month; admitted April 29, 1895. Boy first complained of sore throat two days ago; now both tonsils are swollen; upper half of right tonsil is covered with a sheet of membrane, yellow-looking, and softened. There are a few follicular spots of yellow matter on lower parts of left tonsil. Boy is of good colour, well nourished, breathing easily, and with no sign of dyspnoea; T. 98° 6', P. 116 (regular, fairly full, not compressible), R. 28; tongue fairly clean, moist; heart, first sound at apex somewhat impure, other sounds clear; lungs, no dulness; left lung posteriorly gives a lot of very short sibilant rhonchi; right lung almost free; glands at both angles of jaw enlarged. One bottle of Behring's No. 1 serum (600 anti-toxin units) injected at 2.30 p.m. The boy was put on the usual medicinal treatment.

April 30.—Right tonsil nearly clean; left tonsil clean. 9 a.m., T. 98°, P. 86, R. 24; urine acid, sp. gr. 1020; no albumen. Henceforth the case did well. The throat was clean on May 2, and the patient was discharged on May 10, 1895—earlier than usual, owing to the overcrowded state of the diphtheria ward. Diphtheria bacilli found on bacteriological examination.

CASE 20 (under charge of Dr. Wilton Love).—M. E. J., aged six years and two months; admitted April 30, 1895; girl has been ailing three days; first complained on April 27; now there is a large piece of soft, yellowish membrane on the upper part of left tonsil, and a few yellowish specks on the upper part of the right tonsil; lower part of right tonsil is one sheet of yellow membrane; a number of small yellow spots are to be seen on both right and left sides of soft palate and anterior pillars of fauces; glands at both angles of jaw swollen. T. 103° 8', P. 140 (regular, fairly full, not compressible), R. 48; tongue coated with yellow fur, centre somewhat cleaner; heart clear; lungs clear; no hoarseness, breathing quite easy; both tonsils much swollen. She was put on the usual treatment, and one bottle of Behring's No. 1 serum (600 anti-toxin units) was injected under skin of abdomen.

May 1.—9 a.m., T. 102° 2', P. 132, R. 30; more membrane on right tonsil than yesterday, also it looks swollen; complains of pain at site of injection; no induration; no blush.

May 2.—9 a.m., T. 98° 8', P. 110, R. 32. Both tonsils covered with a swollen sheet of yellow membrane; no tenderness at site of injection; urine, sp. gr. 1030, acid, no albumen.

From this time onwards the case has gone well. The throat was clean on May 6, when urine was acid, sp. gr. 1030, and contained a trace of albumen. She was discharged, owing to crowded state of the ward, on May 14, 1895.

Diphtheria bacilli found on bacteriological examination.

CASE 21 (under charge of Dr. P. Bancroft).—I. H., aged three years three months; admitted May 6, 1895. Girl has been noticed unwell for about a fortnight; croup was first noticed two days ago, and has got worse since; only a little cough. On admission the face was somewhat cyanotic; there was much dyspnoea, with recession of epigastrium on inspiration. There was one small yellow speck on right side of posterior wall of pharynx, throat being otherwise clean. Dyspnoea was both expiratory and inspiratory. T. 99°, P. 135 (regular, compressible), R. 24. Tongue furred and dryish; heart clear; lungs clear. Half a bottle of Behring's No. 2 serum (600 anti-toxin units) was injected about 10.45 a.m. She was intubated about noon. The usual medicinal treatment was employed.

About 2 p.m. she got one hand loose, and pulled up intubation tube, but breathed easily afterwards. At 5 p.m. one bottle of Behring's No. 1 serum was injected (600 anti-toxin units) under skin of abdomen. No swelling or blush at site of previous injection.

May 7.—9 a.m., T. 100° 2', P. 128, R. 27. Throat clean; breathing very badly; much recession of ribs; re-intubated, but tube was pulled up by child almost immediately, but some relief was nevertheless afforded to the breathing; cough very dry; colour still bluish; very little swelling, no redness round second injection mark; urine acid, sp. gr. 1030, mere trace of albumen, in 24 hours passed 3x.

May 8.—9 a.m., T. 99° 6', P. 96, R. 23. Throat clean; breathing easy; no recession on quiet breathing; no longer cyanotic; slight tenderness near site of second injection no blush no swelling; urine acid, sp. gr. 1030, trace of albumen, in 24 hours passed 3xiii.

May 9.—9 a.m., T. 98° 6', P. 90, R. 20. Throat clean; no tenderness in abdomen.

Henceforth case progressed well. Diphtheria bacilli not found.

CASE 22 (under the charge of Dr. Gibson).—J. L. B., aged one year ten months; admitted May 6, 1895. Girl began to ail two days ago with croup, which has remained much the same since; not much cough. On admission there was much dyspnoea, and great recession of epigastrium on inspiration; some cyanosis, though lips were a fair colour. T. 100° 4', P. 153 (fairly full, regular, compressible), R. 40; tongue furred, dryish; heart clear; lungs, anteriorly, occasionally some large moist sounds; posteriorly, right lung seems clear, left has some occasional crepitations in posterior axillary line; glands at angle of jaw a little swollen on left side; whitish patches on left tonsil and on posterior wall of pharynx, especially numerous on right side; on pressing down tongue with spatula, almost pure pus welled up at back of fauces. Half a bottle of Behring's No. 2 serum was injected at once (500 anti-toxin units), and very shortly after she was intubated; she was put on the usual medicinal treatment. The temperature rose during the day. At 5 p.m. a bottle of Behring's No. 1 serum (600 units) was injected subcutaneously in abdomen. At 6, 7, and 8 p.m. the temperature was 103°; it then varied much till next morning. There was some diarrhoea.

May 7.—9 a.m., T. 102° 8', P. 144, R. 39; no blush or swelling at site of injection; colour of complexion is distinctly yellowish; membrane on both tonsils and on pharynx; moist sounds, probably only transmitted, audible over a good deal of the chest, but at right base some smaller moist sounds are distinctly audible, and breathing is harsh; alae nasi working. Another bottle of Behring's No. 1 serum (600 anti-toxin units) injected into right side of abdomen. She was packed and sponged several times during day, owing to high temperature, which fell a little during the night; stimulants were used freely.

May 8.—Sudden semi-asphyxia occurred at 1 a.m.; tube was removed and re-inserted about half-an-hour later; colour improved, but recession remained great. Similar thing happened about 7 a.m.; tube was removed, but not at once put back. Another bottle of Behring's No. 1 serum (600 units) injected. 8.45 a.m., colour very livid; tube put back with some trouble, and colour soon improved, but recession of ribs remained very great; each tonsil is covered with membrane; dullness at right base; few rhonchi; some crepitations at end of inspiration; left lung fairly clear. 12 (noon), T. 103°, P. 158, R. 54; temperature continued high all day, and again fell during the night.

May 9.—Trouble in right lung seems to have extended;

pulse poor and hard to feel; still recession, but scarcely so deep as yesterday. 10 a.m., T. 103°, P. 206, R. 62; takes food well; diarrhoea stopped. Another bottle of Behring's No. 1 serum (600 units) injected; pulse seemed to improve a little in quality during day, but towards night she sank, and died about 11 p.m.

Diphtheria bacilli found on bacteriological examination

PROCEEDINGS OF BRANCHES.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE general meeting was held at the Royal Society's Rooms, on Friday, 28th June, 1895. Present: Dr. Jenkins (president) in the chair; Drs. Pockley, Thrive, Clubbe, Knaggs, Mullins, Coutie, F. H. Quaipe, O'Hara, Neill, Crago, Charles Martin, Lyden, Schrader, Newmarch, Todd, F. W. Marshall, Angel Money, Carruthers, Sydney Jones, Blackwood, Worrall, McKay, Morgan Martin, E. F. Weekes, Ross, Fiaschi, James McLeod, Macdonald, Gill, West, Walton Smith, Lennhoff, Colpe, Dick, Megginson, Jamieson.

Visitor: Dr. Cooper.

THE PRESIDENT intimated that an apology for non-attendance, on account of severe cold, had been received from the hon. secretary.

The minutes of the previous meeting were read and confirmed.

The election of the following new members was announced:—Dr. Carruthers, Balmain; Dr. Bloch, Albury; Dr. Flashman, Parramatta; Dr. Macdonald, Queensland; Dr. McBurney, Queensland.

DR. POCKLEY exhibited a patient suffering from cholestrine crystals on the posterior surface of the lens of the eye, with hæmorrhage into the vitreous of the other eye.

DR. FIASCHI exhibited a patient suffering from sycosia.

DR. CRAGO and DR. ANGEL MONEY made a few remarks on Dr. Fiaschi's exhibit.

DR. MULLINS read a paper on the duties and responsibilities of medical practitioners in New South Wales.

THE DUTIES AND RESPONSIBILITIES OF MEDICAL PRACTITIONERS IN NEW SOUTH WALES.

BY GEORGE LANE MULLINS, M.A., M.D., T.C.D., PHYSICIAN TO THE HOSPICE FOR THE DYING, SYDNEY.

MANY of our professional brethren in the country districts are under the impression that, so long as they do their duty according to the best of their ability, they are in no danger of being annoyed by malcontents or of becoming involved in a law-suit at the instance of unprincipled persons. This is an error which, unfortunately for themselves, many of them find out when too late. Many of the actions at law—indeed we may say, most of them—are brought for the sole purpose of what is commonly known as levying blackmail. "Against any one of us," says Professor Stirling, of Adelaide, "it may happen that in the discharge of

our duties, either in hospital or in private practice, a charge of carelessness or incompetence, or even of a worse offence, may be brought by an unscrupulous or discontented patient. To the credit of human nature, such charges are seldom brought; to the credit of the medical profession, they are still more seldom successful." Surrounded as we are, then, by traps set for us, it appears to me that it would be well for us, by taking the experience of those who have come before, to consider what means we may adopt to avoid these pitfalls which lead so surely to disaster.

Let me here, in order to prevent any misunderstanding, say that the members of the Council of New South Wales Medical Union are not, either collectively or individually, liable for the opinions and suggestions expressed in the course of this paper, for which I accept the full responsibility.

The medical laws of New South Wales are in a primitive state. This is, I believe, the only country in the civilised world where quackery is triumphant, and rogues, assuming to themselves the virtues of honest men, are protected by the laws of the land. Sixteen Parliaments have come and gone, and yet no Medical Act has been passed since the advent of Responsible Government.

By the Medical Witnesses Act (1838), every legally qualified medical practitioner is required to attend as a witness at a coroner's inquest or any inquiry by a Justice of the Peace touching the death of any person, when called upon by the coroner or justice, as the case may be. He may also be directed to perform a *post-mortem* examination of the body of the deceased, either with or without an analysis of the contents of the stomach or intestines. For these services he is entitled to the sum of one guinea for his evidence and two guineas, in addition, for the *post-mortem* examination, with a travelling allowance of one shilling a mile beyond a distance of ten miles. The penalty for neglecting to attend when called upon is not less than three nor more than twenty pounds. Under the provisions of the Infectious Disease Supervision Act, 1881, the medical practitioner in attendance upon any case of small-pox, or eruptive fever which may reasonably be supposed to be small-pox, must immediately report the matter in writing to the authorities, under a penalty of not less than ten pounds.

Leprosy also must be reported in a similar manner.

By the Dairies Supervision Act medical practitioners are bound to notify all cases of infectious disease occurring in dairy premises or milk

stores, under a penalty not exceeding £20. The following have been declared to be infectious diseases under this Act, viz., cholera, enteric fever, small-pox, scarlet fever, diphtheria, measles, and syphilis. This Act is in force only in the Counties of Cumberland, Camden, Argyle, Northumberland, Durham, and Gloucester, and the municipal districts of Albury, Balranald, Broken-hill, Narrandera, and the police district of Shoalhaven.

Having glanced at the duties of medical men, as defined by the various Acts of Parliament in force, we may now consider the responsibilities of the members of our profession.

LUNACY.

One of the most important acts a medical practitioner may be called upon to perform is undoubtedly that of signing a certificate in lunacy. Under section 6 of the Lunacy Act (42 Victoria, No. 7), a person who is considered to be of unsound mind may be brought before two justices of the peace, who shall "call to their assistance any two medical practitioners who may have previously examined such person apart from each other, and separately signed certificates with respect to such person according to schedule 2 of this Act." Having considered these certificates, and also any other evidence that may be brought forward, the justices may, by an order, direct such person to be removed to some hospital for the insane or to some licensed house for treatment.

Under section 8 of the Act, a request may be received from a relative or friend of the patient. Such request must be signed in the presence of a Justice of the Peace, or a clergyman licensed to celebrate marriages, and must be accompanied by certificates from two medical practitioners. Even with these precautions, the superintendent of the asylum may refuse to receive the patient, should he not be convinced of the insanity. As safeguards against collusion or fraud, the two medical certificates cannot be received from father and son, brothers, partners, or assistants; nor shall any medical practitioner himself, or by his servants or agents, receive to board or lodge in any licensed house, or take the charge or care of any person, upon or under any medical certificate signed by himself or his father, brother, son, partner, or assistant; nor shall any medical practitioner, who may have signed any certificate for the reception of any person into a licensed house, be the regular professional attendant of such person while under care or charge under such certificate. The penalty for signing a certificate without having seen and carefully examined the person to whom it relates is a fine of not more than £50. Any practitioner wil-

fully and falsely certifying that any person is insane, knowing him not to be insane, is guilty of a misdemeanour. The certificate must state that the patient is insane, and that he is a proper person to be taken charge of and detained under care and treatment, and the reasons for this opinion are to be given in detail. Facts observed by the practitioner himself must be given in every case. It is on these "facts" that medical men sometimes come to grief. Every practitioner who signs a certificate of this kind must be prepared to defend his opinion, if need be, in a court of law, perhaps in the distant future. Too much care cannot be given to such a certificate, for by it we may be the means of depriving a fellow-being, not only of citizenship but also of his liberty for life. Fortunately, up to the present time no medical practitioner in this colony, so far as I am aware, has been subjected to any prosecution or annoyance for signing lunacy certificates. It should always be a rule of conduct among us as medical men never to sign a certificate of lunacy unless we have seen and very carefully examined the patient apart from any other practitioner, and, as the result of such examination, feel assured that the patient is insane, and that we are able to state such facts, observed by ourselves, which will leave no doubt in the mind of the medical superintendent of the asylum as to the insanity of the patient and the sincerity of our action.

PRESCRIPTIONS.

The old adage, "A clear conscience fears no accusation," is, as many of us know only too well, disproved daily. The case of *McKeon v. Van Someren* may be quoted here as an illustration. Dr. Van Someren was a well-known practitioner in Orange in 1892, when in April of that year he was called in to attend Mrs. McKeon, who was suffering great pain. He prescribed a mixture containing liq. opii. sed. (Battley) M. xv. and tinct. belladon. M. viijss. in each dose. The patient vomited the first dose of this, and four hours afterwards another dose was given by those in attendance in the sick room, contrary to Dr. Van Someren's verbal orders. Shortly afterwards the patient presented all the symptoms of opium poisoning. An action was brought against Dr. Van Someren in the District Court at Orange, in October, 1892, before a jury, who awarded the plaintiff £20 damages on the ground that the defendant had not given written instructions for the discontinuance of the medicine should the pain cease. Unfortunately, Dr. Van Someren did not apply for a new trial. Had he done so there can be little doubt that the appeal would have been allowed, and the verdict

of the jury reversed. This case is instructive, and gives us fair warning.

When we order the internal use of any powerful or poisonous drug we should write the instructions fully on the prescription, so that nurses cannot make a mistake.

It would be well also never to allow a patient to deal with a chemist who has once dispensed a description with drugs or preparations other than those ordered by us.

MIDWIFERY.

With regard to accouchement cases it might be well to lay down a few maxims.

1. Do not prophesy the length of time the labour will last.
2. Allow no persons except those who are on duty to remain in the room during the progress of labour.
3. Do not allow frequent vaginal examinations by midwives or assistants.
4. After the labour examine the perinæum carefully; if necessary, put in one or more sutures, but if you do not think it necessary to put in a stitch on the first day, do not do so afterwards, no matter how much the patient or her friends may importune.
5. See that the nurse keeps her hands and all instruments, &c., scrupulously clean.

Most medical men remember the case of Hull v. Cummings, which was tried at the District Court, Sydney, in May, 1894, when the plaintiff sought to recover damages for alleged negligence in the treatment of plaintiff's wife in her confinement. Drs. Chambers, Foreman, Worrall, and Graham testified in court that Dr. Cummings had treated the plaintiff skilfully, and had done all that was possible to save the life of the patient. In commenting upon this case, the *Australasian Medical Gazette* said: "Here we have the sad spectacle of a practitioner of ten years' standing dragged into a court of law, with all its attendant worry, loss of time and money, and the serious charge overhanging one's head of professional neglect. Most of us know the anxiety these cases give, and they are liable to occur in any man's practice, no matter how careful he is. Had the verdict been otherwise than for defendant, no medical man could feel safe from an action at law, and practice would become intolerable; its strain and anxiety is great already, without the additional terror of ungrateful clients suing for damages."

ANÆSTHETICS.

It is well, whenever practicable, to request the services of a second medical man when anæsthetics are to be administered. In many cases, for instance in some country districts, this is

impossible, and, of course, we must do the best we can under the circumstances. Again, too, in some simple operation, when we do not want complete anæsthesia, it would be absurd to call in another, and leave the patient suffering in the meantime. But we must never forget that there are certain cases when, with the strictest precautions, deaths occur, and then, when the inquest is held, some would-be-wise juryman suggests that the medical man be censured for not calling in an assistant.

SURGICAL INJURIES AND OPERATIONS.

The case of Cunneen v. Cooper, tried in Sydney in March last (reported in the *A. M. Gazette*, May, 1895), is so fresh in the memory of all of us that it is unnecessary for me to go into the case at length. This action, however, shows us that, no matter how clearly the evidence may be in our favour, we cannot trust in all cases to a jury. "It is hard to suffer wrong, and pay for it too," says an old proverb. It would be well, therefore, to bear in mind the following rules:—

1. In all cases, except simple injuries, ask for a second professional opinion as soon as possible. If this be impracticable, explain the nature of the case fully to the patient in the presence of some *reliable* witness.

2. In cases of fracture, &c., examine for possible injuries and dislocations.

3. Always explain the possibility of deformity or bad union.

4. In cases of burns, scalds, &c., always warn the friends of the dangers of the shock.

Sir James Paget (Clinical Lectures and Essays, "The Calamities of Surgery") gives good advice in the following general rules:—

1. You should study very carefully all of what are called the minor parts of your profession.

2. Never decide upon an operation, even of a trivial kind, without first examining the patient as to the risks of his life.

3. Don't be too ready to operate in your own houses, or in your own rooms. Do not sound the bladder of a patient for the first time, or pass a catheter for the first time, in a man of questionable general health in your own room.

4. Do not operate upon even small inflamed parts.

5. Always look carefully to the condition of the room or the house in which the patient is living, and set aside, so far as you possibly can, all the risks that may be thus incurred. Look to the sanitary arrangements about the man.

6. Never do an operation if you can cure the patient by any reasonable medical or other means.

7. Be quite clear about carrying out carefully the last stages of all operations.

8. Look very carefully to your apparatus.

"Therefore," concludes Sir James, "study fairly and fully beforehand all the things that may occur to you in an operation and after it; make yourselves, as far as you can, masters of each case, and generally masters of your whole profession; and then you will neither be afraid of your responsibilities nor ashamed of your failures."

GYNECOLOGY.

Do not undertake any examination of an unknown female patient unless a third person be present.

Be very careful in passing a sound or in operating upon a strange patient.

TEMPERATURE AND PULSE.

Wherever possible take the temperature, and record it on a chart, together with the pulse rate. Keep these charts for future reference.

URINE.

As a general rule examine the urine at the beginning, and occasionally during the course, of an illness.

GENERAL.

Make notes of all cases for future reference.

Do not say, after the patient's death, that you knew all through the illness that he would not recover, unless you have told the patient's friends so previously. Do not speak of your patient's ailments to, or in the hearing of persons not immediately concerned.

"It should be a rule of professional conduct," says Professor Austen Flint (Clinical Medicine) "not to communicate information concerning the maladies of patients except to those entitled to receive it. Patients have a right to the privacy of their diseases, albeit it is but little respected by individuals or the public. The question so often addressed to physicians, 'What is the matter with this or that patient?' is asked in innocence of its impropriety, and therefore, does not challenge rebuke; but pains should be taken to have it generally understood that such question is improper, and that the physician is not at liberty to answer it, unless authorised by the patient."

Never speak ill of any brother practitioner. If you cannot say good words do not say anything.

In conclusion, remember that "it is harder to avoid censure than to gain applause; for this may be done by one great or wise action in an age; but to escape censure a man must pass his whole life without saying or doing one ill or foolish thing."

The PRESIDENT said he must congratulate Dr. Mullins on his paper, setting forth as it did the duty of the medical man. It was to be regretted that a good medical bill was not the law of the land, as everyone knew how primitive the medical laws in this colony were. With regard to the country practitioner calling in a second medical man in the case of the administration of anaesthetics, it was certainly a very difficult matter; oftentimes there was not a second medical man within miles. There could be no doubt that having a third person present during an examination of a female was a good rule, but there were great difficulties in the way of carrying it out. The practice of operating in the consulting-room was to be deprecated.

Dr. FIASCHI said that one point appeared worthy of discussion in Dr. Mullins' paper; that was with regard to the ultra-caution necessary in the signing up of lunatics. He (Dr. Fiaschi) said as soon as a medical man was satisfied that a person was dangerous either to himself or others he should not hesitate to sign the papers.

Dr. NEWMARCH said he agreed with Dr. Fiaschi, and frequently found that when he had signed the papers in a lunacy case and sent for the second opinion, that the patient could not be certified to by the second medical man. He (Dr. Newmarch) said he thought the statements of the relatives would be taken in the case of signing up lunacy cases. There was no doubt the lunacy laws were in a deplorable state, and should be altered.

Dr. LENNHOFF said the medical man should always be careful in signing lunacy certificates, so that a patient should not be committed to an asylum wrongly.

Dr. MEGGINSON said it would be well worth while making inquiries as to whether a patient could give a release to the medical man previously to being treated.

Dr. MORGAN MARTIN said he remembered a case where a man was admitted to the Reception House suffering from temporary insanity from drink. A few days afterwards the proper certificates were brought to be filled in for Callan Park, and certainly no one was more surprised than he that the man was in the lunatic asylum.

Dr. SYDNEY JONES said it would not be wise to let Dr. Newmarch and Dr. Fiaschi's remarks go unchallenged. If a patient could provide proper attendance he should not be sent to an asylum. We should not hurry the signing of lunacy certificates. If we were not careful in matters of this character we were likely to get into trouble. He (Dr. Jones) was thankful to Dr. Mullins for his reminders as to our duty in all cases. In cases of examination of female patients, Dr. Mullins stated that a third person should be present. This was not always convenient. We could not afford to keep a nurse for the purpose. Of course a patient might be advised to bring a female friend; but in many cases we must trust to our conscientiousness.

Dr. WORRELL said he wished to endorse Dr. Sydney Jones' remarks. He would like to have this recorded in the minutes of the meeting, as it might go forth as the opinion of the Society that it was absolutely necessary to have a third person present at certain examinations.

Dr. POCKLEY said his teacher's advice was never to have a third person present, as two might trump up a charge, but if there was only the patient present, then it was one against one.

Dr. FIASCHI said he feared he had not made himself quite plain about the matter of signing lunacy certificates. He intended to say that when a medical man was

quite sure that a patient was a lunatic, then he should be signed up. Of course if a man can be protected privately instead of publicly, well and good.

Dr. MULLINS said, in reply to Dr. Worrall, that he (Dr. Mullins) took the whole responsibility of the paper, and he did not think it was likely to be quoted in law cases. The paper contained merely suggestions, which could be acted upon or not as the individual desired. There could be no question that care should be bestowed upon lunacy certificates. Dr. Newmarch said the statements of relatives would be taken, but he (Dr. Mullins) thought otherwise. If the evidence of relatives could be taken, where was the need of medical certificates? He never signed a lunacy certificate, except from what he himself knew. Lunacy from drink was not considered as legally insane; the only thing to do in a case of this character was to put the man in the streets, then the police would put the man in the Reception House. With reference to the examination of females, he thought the presence of a third person a safeguard, and as to Dr. Megginson's remarks about a release, that could not be legally done.

Dr. NEWMARCH said he would like to correct an impression which had been made by his remarks. He did not intend to convey that a patient should be hurried off to a lunatic asylum upon slight evidence, but, that once it was determined that a man was insane, then the certificates should be signed. He (Dr. Newmarch) was very particular, too, in making the fullest inquiry before certifying.

Dr. M'KAY then read his paper on the "Progress of Gynaecology."

DEBATE ON DR. M'KAY'S PAPER ON GYNÆCOLOGY.

Dr. THRING said all must feel indebted to Dr. M'Kay for his paper. He (Dr. Thring) did not altogether agree with Dr. M'Kay's remarks about Alexander's operation, as he had seen some very good results, as instanced in one case, which had been performed five years ago, and the woman had been pregnant since. He did not quite remember whether or not Dr. M'Kay had not curetted the very case he had mentioned.

Dr. WORRALL said there much of interest in Dr. M'Kay's paper, and he endorsed his (Dr. M'Kay's) remarks as to the evils which followed curettage in unsuitable cases. Like all other beneficent measures it was liable to abuse. No deduction of any value could be drawn from the statement that "during the past year seventy cases of abdominal section had been performed in the Lewisham Hospital with only four deaths." It was necessary to take into consideration the class of case; if, for instance, one set of men operated in grave cases only—operations mostly of necessity—and got through comparatively few in the year, and another set of men, in a smaller hospital and outdoor clinic from which to draw, nevertheless performed seventy sections in the same time, it naturally followed that the latter series must include many cases of a less serious type than those in the former series, and that, therefore, although the mortality rate might be low, the results in reality might not be so good as in the first set.

As regards laceration of the cervix uteri, he believed every case of the kind should be repaired—restored to the natural condition. He had never seen a marked laceration of the cervix of any standing in which secondary changes had not taken place. Referring to Alexander's operation, he admitted it was not perfect. There was no operation for the cure of retro-displacement of the uterus which was certain and safe. Ventro fixation of the uterus no doubt was more certain, but it had a distinct element of danger which was absent in

Alexander's operation, and he had found the results from the latter very good when performed only in suitable cases, viz., those in which there were no adhesions, and the uterus was not too large.

Dr. SYDNEY JONES said, as to Alexander's operation, he did not agree with Dr. M'Kay's remarks, as he (Dr. Sydney Jones) had known cases where a very great deal of advantage had been obtained from the operation. He (Dr. Jones) had examined patients who had been operated upon, and had found that the operation had been satisfactory. As to Dr. M'Kay's statement that he had not seen Alexander's operation used except in Sydney, he (Dr. Sydney Jones) had seen the operation done in the very hospital Dr. M'Kay had mentioned, namely, Soho Hospital. As to repairs to the cervix, he thought where there was laceration it should be dealt with at once. Dr. M'Kay had not given the general practitioner his due. He (Dr. Jones) was quite sure that the general practitioner in this colony was quite equal to his confrere at home, and was quite able to diagnose an enlarged tube.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting of the Branch was held at the Austral Salon, on Wednesday evening, June 26th, at 8 p.m. The evening was very wet, but the following members were present: The Vice-President (Dr. O'Sullivan) in the chair, and Drs. McAdam, Brett, K. W. Anderson, Kent-Hughes, Andrew, Mullen, Springthorpe, Officer, and J. R. M. Thompson.

The minutes of the previous meeting were read and confirmed.

The SECRETARY announced the election of the following new members: J. E. Andrew, Hawthorn; H. H. Ritchie, Melbourne Hospital; T. E. Green, Melbourne Hospital; F. A. Newman, Melbourne Hospital; J. Cuning, Melbourne Hospital; J. L. Henderson, Omeo.

EXHIBITS.

Dr. W. KENT HUGHES showed a case of a girl, *æt.* 15, in which a dense leucoma had been successfully treated by compression of the vessels feeding it. The vessels were first picked up with fine forceps, and then seized with Spencer Well's forceps, which were left on for four or five minutes, as many as eight being applied at once. The leucoma was of 18 months' standing when it first came under treatment, and for six months the usual applications were used assiduously without apparent benefit. The method above described was applied several times, with a week's interval, and in about three months the cornea was quite clear. It is not so severe as peritomy, and is certainly more suitable for the slighter cases. It acts by injuring the walls of the vessels, so as to produce narrowing if not occlusion of the latter. This was the sixth case in which the above treatment had proved very satisfactory. In one case the opacities had been treated for eight years with ointments, &c.

Dr. Hughes also showed a case of moderately severe flatfoot, with marked hallux valgus. The hallux valgus was of long duration, and in the right foot all the digits were inclined outwards. Dr. Hughes pointed out that when the great toe was displaced, the flexor longus hallucis and the extensor proprius hallucis were thrown out of gear, and consequently more work was thrown on the ligaments and remaining muscles in maintaining the "arch" of the foot. The patient (*æt.* 50) had improved considerably in 10 days from tiptoe exercises and massage, and a boot was being made for her which, by means of a strap, would tend to overcome and reduce

the valgus. It was a very common mistake to make the foot wider at the level of the metatarso phalangeal joint instead of from that point to the end of the great toe.

Dr. MULLEN exhibited a tumour (glioma) of the left temporo-spheroidal lobe. Dr. Springthorpe explained that 18 months ago the patient had an epileptic attack, followed six weeks after by acute mania, for which she was sent to Kew. The mania was unusually severe, but suddenly ceased, and patient came out on probation. After curettage at the Women's Hospital she came into the Melbourne Hospital, where she suffered from headache, mental derangement, and double optic neuritis, without any motor or sensory troubles. She was removed by her friends, who believed that there was nothing wrong with her, though the diagnosis of probable brain tumour was given. Shortly after she had to be again placed in Kew, where she died suddenly on the 24th.

Dr. SPRINGTHORPE showed a series of cases suffering from different degrees and forms of aortic disease.

(a) Aneurism of the aorta, apparently just above the sinuses of Valsalva—traumatic in origin—perforating the sternum without pain; practically cured by drachm doses of pot. iod. thrice daily for ten months. A second aneurism started at the lower margin by a second severe blow, and now increasing.

(b) Double aortic disease with dilated aorta, due to strain in a man aged 42, with extensive diastolic thrill, and auto-audible diastolic bruit since Christmas, 1893.

(c) A similar case, due also to strain in a fireman addicted to drinking, with similarly well-marked signs of dilated aorta, but diastolic bruit not auto-audible.

(d) Aneurism of ascending transverse aorta in a steady man aged 41, traced to very severe strain two and a-half years ago. Progressive dyspnoea ever since, with recently signs of pressure on sympathetic nerves, spinal nerves and right bronchus, and the inequality of pulses.

(e) Case of double aortic disease with consecutive patency of the mitral valve, apparently endo-cardiac in origin, and without any noticeable change in the calibre of the aorta. With the cases were shown sphygmographic tracings prepared by Drs. Officer and Tymms, illustrating exceedingly well the accompanying changes in the radial pulses.

Dr. Officer then read the following paper:—

POISONING BY CASTOR OIL SEEDS.

As cases of poisoning by the seeds of the castor-oil plant have on a number of occasions proved fatal, and as this plant is rather common in Victoria, and especially in and around Melbourne, I trust that in consideration of these facts these notes may prove interesting, and will be a sufficient excuse for occupying your valuable time. A case is recorded in which three grains of the fresh seed proved fatal, and another in which one seed produced serious symptoms.

In the *Medical Times and Gazette* in 1861 the death is reported in an adult male after having by mistake eaten three seeds. Such an astute observer and reliable authority as Christison undoubtedly was, has on record the death of a child after having taken two seeds; and Chevallier treated a female adult who had taken some of the seeds, in which case a fatal result ensued.

The symptoms in all the recorded cases were those of gastro-intestinal irritation, with rapid and profound exhaustion.

Turning to the botany and chemistry of the plant, the *Ricinus Communis* is closely related to the *Croton Tiglium* in its botanical characters; but it is not in the expressed oil that their kinship is shown, but rather in the effects of their respective seeds, being in both cases those of gastro-intestinal irritation.

The active constituents of the castor-oil seeds are said to be chiefly Ricinoleic acid and an alkaloid Ricinin, the latter residing chiefly in the embryo of the seeds in minute quantities.

The seeds have an outer coating which, if not broken through by mastication or bruising, may effectually shut off the poisonous constituents from contact with the alimentary canal.

For a long time the above-mentioned constituents were said to account for all the symptoms of poisoning, but the honour of discovering the most active constituent and classifying it according to its true nature rests with Professor Ehrlich. This scientist, in his experiments on immunity, found a substance in extremely minute quantities in the seeds which he has named Ricin. This substance is such a powerful poison that one gramme of it suffices to kill 1,500,000 guinea-pigs, equalling about 10,000 adults, that is, one grain would kill about 625 adults, or $\frac{1}{16}$ grain would kill one adult. He found that by carefully feeding the animals with infinitesimal doses he could inoculate them with large quantities under the skin after some time without danger, and he therefore regards the substance as an albumose or tox-albumin. A somewhat similar substance was found by him to be the active constituent in Jequirity seeds.

In the light of his teaching then it is comparatively easy to account for the symptoms produced. It is well known that the refuse left after expression of the oil is poisonous to animals.

M. M., *et.* four years. 16th May, 1895. Patient had eaten some seeds of the castor oil plant at 2.30 p.m. to-day. When I saw her the patient had been vomiting about every seven or eight minutes, the vomiting being accompanied with some straining effort, and the little sufferer complaining of a good deal of epigastric pain. She was, on examination, somewhat collapsed, but not extremely so. Some brandy was given, and after a little time she rallied a little, but only to be again attacked with vomiting. The vomit was largely of bile, with a good amount of frothy mucus. The matters which were first vomited were unfortunately thrown into the sink, and so could not be examined. The stomach was washed out, but the washings were almost clear.

A bismuth and opium mixture was ordered and compresses applied to the abdomen. At 6.30 I again saw the patient, and then the pupils were widely dilated; there was no pulse at the wrist, but the heartbeats were 147 to the minute, the sounds being very weak and almost inaudible. There were slight convulsive twitchings about the eyes and the corners of the mouth; the surface temperature was low, the thermometer only registering 96.8°. A hypodermic of 1-100th gr. of strychnine was given as a stimulant, also iced champagne by the mouth. The bowels up to this time had not acted, but soon after purging commenced, and the condition seemed, to say the least, critical.

Later in the evening (12.30) I again saw the patient. Vomiting still continued, though it is lessening. Purging had continued, the stools being slightly blood-tinged; the patient was very restless, tossing about, and had intense thirst. A mustard-leaf was applied to the epigastrium, ice to suck, and another 1-100th gr. of strychnine hypodermically. The stools were ordered to be kept. Seven hours afterwards I again saw the patient, who was then in a stupid, semi-comatose condition; the evacuations had been copious about three or four times per hour, of a thin serousanguineous character. An examination of the stools disclosed five husks of the beans. Stimulants were continued. The pulse is now perceptible at the wrist, and the tempera-

ture has risen to 97·6, whilst the pulse rate has fallen to 131. The lower abdomen is now very tender, and the muscles kept on guard. Another hypodermic of strychnine was given, and turpentine and laudanum stupes applied to the abdomen. The vomiting is greatly diminished.

At 10.30 same day the vomiting had almost stopped; patient seemed much better, and was lying propped up with pillows, with a good pulse and a normal temperature. The stimulant was decreased, but was still administered.

The further progress of the case presented no clinical features of note, and the patient was sitting up next day, though still very weak.

Dr. SPRINGTHORPE congratulated Dr. Officer upon his *debut* before the Branch. He instanced cases of poisoning by the poison ivy, and the berries of the common "pepper tree." He considered the value of strychnine pushed boldly as established in collapsed conditions, and quoted cases of chlorodyne poisoning and almost hopeless pneumonia in which it had appeared to save life.

Dr. KENT-HUGHES commented on the importance of calling attention to the dangerous nature of castor-oil seeds. He had seen the good of strychnine in chloral poisoning, and agreed that, as a rule, the dose given was too small.

Dr. ANDREW was also grateful for the information. Did it make any difference whether the seeds were dry or green?

Dr. ANDERSON quoted a case of gastro-enteritis in two children, who had been allowed by a nurse to eat the seeds. He eulogised strychnine, and agreed that slight convulsant effects were often necessary if we wished its advantages.

Dr. O'SULLIVAN dwelt on the importance of guarding against such possible poisoning. He had used hypodermics of strychnine largely; and so did all American gynecologists in all cases of shock and collapse. He gave one-twentieth of a grain every half hour until toxic effects appeared. There was no greater boon where the heart muscle could respond. He believed also in such doses thrice a day for several days before giving chloroform in severe operations.

In reply, Dr. OFFICER thanked the members for their kindly references. Both his case and the pneumonia poisoned by toxins and strychnine seemed applicable in both. The great factor in developing the poison seemed crushing and moisture. It might be well if croton oil were analysed from the toxine point of view.

Dr. MULLEN then read his paper, on

THE QUESTION OF CLUBS, DISPENSARY, AND MEDICAL AID SOCIETIES.

By W. L. MULLEN, M.A., M.D., LL.B.,
BARRISTER-AT-LAW, OF MELBOURNE.

In order to be able to trace, or attempt to trace, the position into which the profession is entering in the near future, it is necessary to take a look at the present state of medical practice, to compare it with the status and position of the past two or three decades, to take note of the conditions existing among the people at

large, and to see from the data at hand to what conclusion we can come. There can be no doubt that up to some few years back (say, nine or ten) the medical profession as a body had grand times. There was no difficulty in obtaining work, and paid work too, of various kinds. In every suburb of Melbourne, in almost any country town, all a man had to do was to start practice and keep himself respectable, and success came to him unless he kicked it aside. It was the usual thing for a new arrival, or a fresh local M.B., to be making in his gross takings, after a couple of years' practice, about £1,500 per annum. Thus a medical man lately told me that he started in a country town, and in five years he took in cash £16,000. If a man did not wish to begin practice on his own account, he had the choice of well-paid insurance work, locum tenens work, or of hospital work. All this is now altered, and I think for ever. And the causes that have given rise to this altered state are twofold. First, there is the general depression, which, to a certain extent, we may hope is a passing feature; secondly, there is the rate of increase of medical men—a rate largely in excess of the rate of increase of the population. I will not weary you with figures, but you may accept assurance that the medical men in practice in Victoria, on the register, have increased, and are increasing at about ten times the rate of the general population, if taken over a period of five years. Unfortunately, circumstances point to a continuation of such increase.

In the practice of medicine, as in all things, the ratio of supply and demand determines in the average the price of the services rendered. No doubt in extreme cases special excellence will always enable certain men to maintain a high standard of remuneration, but I am speaking to-night of the profession as a whole. The rate of remuneration for the general practitioner has steadily gone down during the last ten years, of which time I can speak by personal knowledge. In private practice, in lodge practice, in resident hospital appointments, in all kinds of work, the remuneration has been gradually lessening, and the question before us to-night is whether this diminution is likely to continue.

Now, I think this diminution *will* continue, and that we are approaching to the condition of medical practice as it exists in England—a mere scramble for existence. Let us see the dangers that beset us—not general dangers, such as the yellow man with the white money, or financial depressions, but dangers, continuous dangers, immediately affecting ourselves. First, I shall deal with clubs or lodges. These bodies occupy a very strong position, organised for a definite

object, registered under a comprehensive Act of Parliament, governed by persons of high standing in the political world, and managed either by paid officials, whose sole business is to advance their interests, or else by enthusiastic amateurs whose social status depends on their connection with their lodges. These clubs are impregnable. And of all these friendly societies, the one on which we must look with the greatest concern is the A.N.A. Many a wealthy man who would not join "a lodge," as he puts it, will, from motives of patriotism, or feelings of comradeship, join the A.N.A.; and once he becomes "a native," it is too much to expect that he will pay the lodge doctor for private attendance. Experience shows that the average "native" does not pay.

The rate for lodges has decreased, as I have said, and the tendency is towards a further decrease in one of two ways. The particular scheme which I know finds favour with the Grand Lodge officials is that in each suburb or area there should be medical men, who are to do the clubs, and nothing else, at a salary of about £500 per annum, the number employed to vary with the club lists and the nature of the districts. Can anyone here assert with confidence that if the clubs were to attempt such a plan tomorrow, *we*, as a profession, could withstand it? But, failing this scheme, we cannot shut our eyes to the difficulty in keeping the lodges one has, in face of the underhand tactics—which generally means the reduced remuneration—of other practitioners.

The next cloud on the horizon consists of the sixpenny dispensaries. As yet this matter is in comparative infancy, though of rapid growth in the last few years. These are usually the private property of the practitioner, but run with nearly all the outward semblance and method of a lodge. Considering that a very large amount of the takings must be swallowed up in mere administration, it is difficult to see how the practitioners of these dispensaries can properly attend to the cases. Doubtless others here present know more about these persons than I do, but it seems to me the practice must be carried on in a perfunctory, careless, and even jeopardous manner. Can any one here deny that these dispensaries do harm to us professionally, and can any one suggest a remedy? I cannot.

The gravest objection to these private dispensaries is not directly of a financial nature, but one which is dependent on the abject monetary position of the medical man who has the dispensary. It must be remembered that if we object to a state of affairs such as private medical aid societies we will meet with scant sympathy if we

ground our objections on the low price obtained. We will be told we are jealous, and that we wish to form a ring to keep up prices unnecessarily. The real objection to the private club is the degraded position of the medical man as regards his patients. They look on him as a mere paid tradesman, and as their servant. Now, to a certain extent, a medical man is the servant of his patient, just as a judge is the servant of the public. But, if a medical man is to do his duty properly, he must, as must a judge, be to a large extent the master. Once the patients regard themselves as the masters of the medical attendant whom they employ so soon is his power to benefit them seriously impaired, to the ultimate injury of the patient. To a certain degree the Friendly Society Lodges are free from this danger. The medical man contracts with a body legally in authority in the lodge, who will assist him materially in retaining the necessary authority over the members; but where a medical man contracts direct with the patients who contribute so much a week, through a paid collector of the practitioner, pay it when they like, stop when they like, return when they like, then the immediate and ultimate result must be derogatory to that superiority which is essential to proper medical practice.

Again, as far as I can learn, in these private dispensaries, any one, be he blind or lame or halt, is admitted. In a Friendly Society it is to the interest of the lodge to admit only persons who are healthy; this is the object in fixing an age limit, and of having the applicant medically examined. But in a private dispensary no such safeguard exists, and the custom of admitting all and sundry on mere application must lead to a very large ratio on the sick list, and this state of affairs by increasing the work in proportion to the pay, must result in lessened attention to the patients.

If, gentlemen, we base our opposition to private clubs on these public grounds we need not fear criticism.

In England the question is of the greatest moment. The solution is *in nubibus*, as witness the following (*British Medical Journal*, 1895, p. 1,075):—"To a less degree hospital relief is responsible for much unfair loss to the profession; people well able to pay are daily putting on their oldest clothes, telling white lies to the hospital secretaries, and obtaining advice gratis. We all know it; remedy I fear there is none. We will not take concerted action. General practitioners feel the loss in individual cases, but as the members of the hospital staff feel it less, or in some cases benefit by the system, they would stand aloof from or even strenuously oppose any

attempt to prevent the abuses now going on. No profession is so disorganised, or has so little regard to its welfare, as our own.

If, then, the causes are at work, and if there are no factors at work to oppose them, they must lead to one result, and I must confess that the growing exactions of the lodges, the increase of dispensaries, and the continuing abuses of hospitals taking place in a country where the supply of medical men is largely on the increase, must produce an inevitable and definite result on the position of medical practitioners, and that result will be in a downward direction. It is a hazardous matter to guess at, but I think the outlook for medical men is that, when a man has paid all the expenses of carrying on his profession, he will have a taxable income of about £300 to £600 for his private and family maintenance, and that the bulk will tend to the lesser amount.

I have said that no profession has so little regard for its welfare as our own. I will give two instances. One is our ethical rule that no man may keep open shop. Any medical man who has the pluck to keep open shop in a good position will do a good thing commercially. Many medical men in England have their shops. Our own ethical rules have hitherto stood in our own way here. A second instance of our shortsightedness is in the haphazard way we sue for fees, and in the way we openly condemn a fellow practitioner who sues. We do not sue enough. We ought to sue more frequently, and we ought openly and before laymen to uphold any of our own number who sues for his fees. No doubt, in many cases, men do not sue for fear of some temporary and immediate disadvantage; but it is this feeling which is responsible for most of our troubles. "Very few men," says Dr. Welsford, of Dover, in a late number of the *B. M. J.*, "seem to be alive to any but immediate and personal interests, and public spirit among us is conspicuous usually by its absence. Everybody has his own axe to grind, and as soon as a prominent member of a society becomes dissatisfied he forthwith secedes. It will be some time before we realise that the welfare of the profession means the welfare of the individual, but until we do realise this, and until the general practitioner becomes convinced that no one is going to help him if he will not help himself, progress will be necessarily slow. Each individual of the medical profession is responsible for the continuance of the abuses of which he complains unless he sets himself to remedy them as far as he can, and unless he does his best to promote measures of reform. At medical meetings any matter bearing on the question of reform is usually placed last on the agenda list, and so keen an interest do general practitioners take in

these matters that the room very often is half empty before the discussion comes on. Under these circumstances, I fail to see that we have anybody to thank but ourselves for the slow progress of reform."

These remarks are well worthy of thought, but were they repeated twenty times they would do nothing to lessen the causes that are at work to degrade our calling, for the simple reason that no heed would be paid them. We are not united. We have in Victoria a Medical Board whose sole function is to register practitioners, and which can in no way unite the profession. We have three medical societies to a certain extent united, to a greater extent antagonistic to each other. The only body which can do anything—the Medical Defence Association—is very imperfectly supported. As no one is paid to look after the interests of the profession, no one does it. We drift; each man takes that course which he considers most advantageous to himself for the time being. Men high up in the profession interpret the word ethics to mean self-interest, and act accordingly.

Members will see that I have dealt only with a few of the causes which are tending to reduce the financial status of the profession; there are, of course, others. The decrease of disease, owing to improved sanitary conditions; the increasing knowledge of the "intelligent layman," the continuous encroachment of midwives (the facts set out in the *B. M. J.*, May 18th last, p. 1,107), are the first to occur to me. But I will not further take up your time. I have set out enough causes without adding to them; anything further is unnecessary. I have outlined what is, I think, the future outlook of our profession, and I shall be glad to hear anyone show me that I am mistaken in my views.

Dr. M'ADAM had listened with great interest. The question was one of vast importance. He would suggest adjourning discussion until next meeting.

Dr. THOMSON agreed, and seconded the suggestion.

Dr. SPRINGTHORPE said that the profession everywhere was becoming very seriously alive to the importance of the question. He would suggest that a special evening be devoted to its discussion. No doubt the council would make the necessary arrangements. Dr. Mullen's paper should be in all their hands, and speakers selected.

Dr. O'SULLIVAN agreed that the paper was most opportune, and that it was absolutely necessary that members should have it before them.

Dr. ANDERSON supported the discussion of the question at the next general meeting. He would move that authority be given the council to take such steps as they might deem fit to have the paper in the hands of members before next meeting.

Dr. KENT-HUGHES seconded. The motion was carried, and the meeting adjourned.

SOUTH AUSTRALIAN BRANCH OF THE
BRITISH MEDICAL ASSOCIATION.

MINUTES of the sixteenth annual meeting and a special meeting held at the Adelaide Hospital, 27th June, 1895. Present—The President and Drs. Clindenning, Corbin, A. E. Wigg, A. A. Hamilton, Stewart, Evans, Poulton, T. K. Hamilton, Giles, J. A. G. Hamilton, Cudmore, Goldsmith, Hayward, J. C. Verco, W. A. Verco, C. Magarey, Teichmann, Archer, Russell, Fischer, Hone, and London.

The Hon. Sec. (H. Swift) apologised for his unavoidable absence. Dr. London kindly undertook his duties.

Dr. T. K. Hamilton exhibited (a) a case of *Iritis Condylomatosa*. The patient came under observation on June 10th, with a history of having had a primary sore eight months ago, and "secondaries" about the time of the onset of this eye trouble. A yellowish-white nodule was found on the nasal side of the right iris, and the pupil seemed to be more or less adherent all round. As soon as the pupil commenced to dilate, though very imperfectly (owing to dense adhesions), a small hypopyon appeared at the bottom of the anterior chamber. This was absorbed in about two days, and on June 18th the anterior chamber was found half full of blood. On June 24th the hyphæmia had all disappeared, and now (27th) the neoplasm is rapidly becoming absorbed, and the eye clearing up. This kind of iritis is sometimes designated *iritis gummosa*, but incorrectly so, as the latter can only occur in the tertiary stage, and, moreover, the nodule in this case has not broken down or suppurated as gummata are apt to do. (b.) A case of *Irido-cyclitis, with exudation upon the anterior capsule of the lens*. The first appearance of exudation was a thin coating which covered the posterior surface of the cornea and the iris. This was apparently rapidly absorbed. Then a much thicker exudation appeared, covering the whole of the front of the lens, the size of a 7mm. pupil, rendering the eye temporarily quite blind. This is now, after about six days' treatment, becoming thinner, and is undergoing gradual absorption from the circumference. The pupil also at the same time has become better dilated. Exudation on the lens capsule in these cases is exceptional.

Dr. T. K. Hamilton exhibited a piece of bone about 1.5c.m. long, which a patient, the subject of advanced malignant disease of the larynx, had coughed up, and which is evidently an ossified superior cornu of the thyroid cartilage.

Dr. Poulton exhibited (1) a man operated upon for the radical cure of a hepatic hydatid (Lindemann's operation), in whom a biliary fistula had persisted since. (2) A man operated upon by iliac and lumbar abdominal incision for an extensive abscess, most probably following ulceration of the posterior wall of the duodenum. (3) A child, successfully operated upon by ablation of an immense angioma of the cheek. (4) An appendix removed for suppurative appendicitis by Mr. Barker's method, with success. (5) An ovarian pedicle, showing kangaroo tendon ligatures intact and firmly knotted after fourteen days.

Dr. Hayward, intestines of case showed last meeting. Minutes of last meeting were read and confirmed. Meeting was resolved into special meeting.

Dr. POULTON moved, and Dr. T. K. HAMILTON seconded—"That the by-law 4 be altered by the substitution of the words 'March 31st,' for the words 'December 31st,' so as to read 'Any member whose subscription shall not have been paid on or before March 31st of the current year shall be suspended

from all privileges of membership of the Association, and of the South Australian Branch."—Carried.

The annual meeting was then resumed.

Dr. LONDON moved, and Dr. CORBIN seconded—"That the report of the Council which had been printed and circulated should be taken as read."—Carried.

The PRESIDENT moved, Dr. HAYWARD seconded—"That the Report should be adopted."—Carried.

SIXTEENTH ANNUAL REPORT OF THE COUNCIL,
JUNE, 1895.

The Council has the honour to present the sixteenth annual report. By the Treasurer's balance-sheet, by the continued addition to the number of its members, by the attendance at the meetings, and by the quality of the papers read thereat, the Branch gives most satisfactory evidence of its vitality and usefulness. Seven new members have been elected during the year; four have resigned, of whom two have left the colony; and one member (Dr. C. E. Thompson, Broken Hill) has died. There are now 122 names on the list (which is forwarded with this report), against 120 at this time last year. Eleven meetings have been held, with an average attendance of 24.4. Your Council has had 11 sittings.

During the year the *A. M. Gazette* has been taken over by the N.S.W. Branch. This Branch was invited to join the purchase, but, having no reserved fund to fall back upon, it was compelled to decline the responsibility. It was, however, agreed to continue to extend its support, and the Hon. Sec. was appointed local editor.

The Council congratulates the members upon the quantity and also the quality of the papers read at the meetings, but, at the same time, it regrets to notice how few of the junior members read papers, exhibit cases, or join in the discussions. It would also like to see more interest taken by the country members; pathological specimens and papers can be easily sent by train when members are unable to be present. The discussions following the papers on Bladder Surgery—albeit the subject was very wide—and on the Administration of Anæsthetics were most interesting and instructive.

The May meeting was devoted entirely to living and pathological exhibits, and, owing to the rare and varied display of subjects, was pronounced a decided success, but on future occasions the length of the notes of the exhibits will have to be curtailed.

The fact that 23 subscriptions are still unpaid, although due on January 1st, is sufficient evidence of the dilatory manner in which members perform this duty, and of the steadily-increasing amount of unnecessary trouble entailed upon the officers of the Branch.

Appended is a list of the papers read during the year:—

Cases of Osteitis Deformans—Dr. London.

A case of Intussusception, treated by Inflation—Recovery—Dr. Swift.

Two cases of Hepatic Abscess—Dr. Marten.

Bladder Surgery—Dr. Ewbank, Dr. Giles, Dr. London, Dr. Way, Dr. Hayward, and Dr. Poulton.

A case of Actino-mycosis Hominis, with Pathological Report by Dr. Teichmann—Dr. Marten.

A case of Intra Peritoneal Hemorrhage—Dr. J. A. G. Hamilton.

A case of Ophthalmoplegia totalis. A case of Ophthalmoplegia externa—Dr. T. K. Hamilton.

Notes on a case of death from Chloroform—Dr. Teichmann.

Notes on a case of death from Chloroform—Dr. Yeatman.

Hydatid of Bone—The President.

A case of Arterio-venous Aneurism of Thorax—Dr. J. C. Verco.

A case of Tubal Pregnancy—Dr. Teichmann.

A case of Acute Yellow Atrophy of Liver—Dr. Hayward.

Portal Pyæmia, due to Hydatid—Dr. London.

A case of Facial Carbuncle—Dr. W. A. Verco.

The Treasurer (Dr. Corbin) moved the adoption of the Treasurer's statement. Dr. Clindening seconded. Carried.

STATEMENT OF RECEIPTS AND EXPENDITURE FOR YEAR ENDING 30TH JUNE, 1895.

DE.			CR.		
	£	s. d.		£	s. d.
To balance at Bank, 30th June, 1894	205	1 9	By subscriptions to B.M.A....	123	18 0
„ Interest	5	7 7	„ „ A.M.G....	90	7 6
„ Subscriptions (120 members)	252	0 0	„ Exchange	2	2 7
			„ Printing and Stationery	10	14 6
			„ Postage	3	12 3
			„ Clerical Assistance to Hon. Secretary	6	0 0
			„ Christmas Gratuities	2	0 0
			„ Platform	2	15 0
			„ Law Costs	5	15 6
			„ Balance in Bank, 13th June, 1895	215	4 0
	£462	9 4		£462	9 4

A. WATSON, President.

T. W. CORBIN, Hon. Treasurer.

ASSETS AND LIABILITIES.

ASSETS.			LIABILITIES.		
	£	s. d.		£	s. d.
Cash in Bank	215	4 0	Subscriptions due to B.M.A.	126	0 0
Interest	4	17 0	„ „ A.M.G.	46	2 6
Subscriptions Unpaid	48	6 0	Half-year's Expenses	20	0 0
	£268	7 0		£192	2 6

Dr. LENDON was declared elected Vice-president.

Dr. CORBIN was declared re-elected Treasurer.

Dr. SWIFT was declared re-elected Secretary.

The PRESIDENT appointed Drs. Corbin and Hayward scrutineers of ballot for three ordinary members of Council.

They reported that the result of the ballot was—Dr. Evans, Dr. A. A. Hamilton, Dr. H. H. Wigg.

The PRESIDENT declared them duly elected.

The PRESIDENT read the annual address, as below, and then vacated the chair in favour of Dr. T. K. Hamilton.

Dr. J. C. VERCO moved a vote of thanks to the retiring Council for their services, and the President for his address.

Dr. J. A. G. HAMILTON seconded. Carried.

Professor WATSON briefly replied.

ANNUAL ADDRESS

DELIVERED AT THE ANNUAL MEETING OF THE S.A. BRANCH OF BRITISH MEDICAL ASSOCIATION, BY THE RETIRING PRESIDENT, A. WATSON, M.D., F.R.C.S. ENG.; PROFESSOR OF ANATOMY, UNIVERSITY, ADELAIDE.

GENTLEMEN,—As the scientific nature of the treatment you adopt, and the thoroughness with which you diagnose disease, are doubtless proportionate to the interest you take in pathological questions, I will take the liberty of drawing your attention to some points bearing on the pathology of hydatid disease.

Assuming that its prevalence is in direct ratio to the facilities for canine contamination (as, for instance, in Silesia and Iceland), why are the inhabitants of China, who use dog-flesh as food, apparently entirely free from hydatid disease?

Even in Australia (according to Dr. Stirling) hydatids are appreciably less frequent in Queensland than with us; yet, among the shepherds and aborigines of that pastoral colony, dogs are quite as much in evidence as here in South Australia.

Talking of China, we might also ask ourselves why its inhabitants, clad in cotton as they are, so seldom suffer from rheumatic fever; or why, in the squalid parts of Canton, &c., diphtheria has not been noticed. Then again, although the Celestial is more exposed than any other race on the earth to strains from handling heavy burthens, hernia and aneurism are infrequent. (Cantlie has only seen six examples of simple hernia in 40,000 patients). All these are questions which I leave with you.

Forgive the above digression, and let us turn again to hydatids, the distribution of which, in the various parts of the human body, calls for discussion.

If we ask ourselves what are the circumstances which determine the ultimate destination of the wandering embryo, we must confess that our favourite hypothesis of vascular transference hardly covers all the ground.

The conspicuous preponderance of hepatic hydatids is only partially accounted for by a mere passive transference by the blood of the portal vein.

It has been argued that the still large, but less relative, frequency of pulmonary hydatids is due to the embryos having first to surmount the obstruction of the portal capillaries before they can reach their destination in the lung; while the more infrequent presence of the bladder-worm in other organs is accounted for by assuming that the embryo has to run the gauntlet of both the portal and the pulmonary capillaries.

Were this so, the spleen, although it lies in contact with both the liver and the stomach, ought to be very much less frequently infested with hydatids than the lung, because the embryo would have to reach its destination by the systemic circulation (splenic artery); unless, indeed, after boring its way through the stomach, it became engaged in the portal confluence, and found its way to the spleen against the blood current in the splenic vein. It is difficult also on this theory to account for the comparative frequency with which *multiple peritoneal and omental* cysts are found.

On the vascular transference theory, we must believe that these cases owe their origin to an arterial embolic

shower of hundreds of embryos which had successfully traversed the capillary obstructions of the liver and lungs, unless we are to suppose that they either work their way into the omental arterioles or enter the radicles of the omental veins; in which latter case, as in the case of the spleen, they would have to reach their destination against the venous current. Now, it often happens that the lungs have entirely escaped invasion, while a multitudinous cystic development is in progress in the peritoneum and omentum—a condition which would not be probable if the embryonic swarm had passed through the lungs—and we can only believe that it is possible for embryos, after having traversed the stomach, to reach the peritoneal cavity by gravitation or otherwise, there developing into cysts, which acquire their capsules by exudation from this membrane, and which, doubtless, multiply by exogenous proliferation. It is noteworthy, however, that the peritoneum does not always respond to the presence of the parasite in the same active manner, for the bladders may fail to acquire any adventitia, and remain entirely nude and free in the peritoneal cavity. Indeed, when we review the facts of distribution of this and allied parasites, as well as the failure to account for them satisfactorily by a theory of vascular transportation or other passive migration, we are disposed to lay the greater stress on selective affinity as a determining factor which may lead the parasite to prefer certain situations. Of the same class of phenomena is a special predisposition, possessed by certain nude hydatids, to enlarge independently of, or even in direct opposition to, the plane of least resistance.

In this way cerebral hydatids may perforate the bones of the cranial vault—an event which has its parallel in the behaviour of the coenurus, which in a similar way perforates the skull of sheep (in the disease known as “staggers”), and so offers facilities for cure by incision of the scalp.

It is necessary, however, to bear in mind that the external appearances of a cerebral hydatid may be exactly simulated by a parasite of the cranial bones, which has led to the absorption and thinning of their substance.

In the case of the liver too, or even the spleen, another view than that of passive transference is possible, for, these organs lying in direct contact with the stomach, it is possible that the embryos may bore their way directly from the one organ into the other.

Although there is, we believe, no direct experimental evidence in favour of the view that scolices, brood capsules, or even daughter bladders may, when they escape from a parent cyst into a serous cavity, give rise to a crop of multiple hydatids, yet, when we remember the objections to other theories of transit, this hypothesis seems reasonable in the light of certain cases in which the peritoneum and peritoneal surfaces of the abdominal organs, often in the most dependent positions, have been found studded with innumerable small cysts of such uniform size as to suggest a sudden and simultaneous invasion in this manner. In support of such a view, it may be mentioned that in some of these cases there had been a history of rupture, or of an antecedent tapping of the cyst. If the possibility of this occurrence should be established by experiment, which so far is wanting, it has, as pointed out by Graham, an important bearing upon surgical treatment in the sense that any procedure which permits of leakage into the peritoneal cavity is to be avoided.

A fact also which must be taken into consideration, when we seek to explain the distribution of hydatids by vascular transference alone, is the remarkable deficiency in our records of lymphatic glands affected with

hydatids, especially as we know how prone such glands are to become the seat of secondary neoplasms and inflammatory processes by way of the lymphatics.

THE ADVENTITIOUS CAPSULE.

An aseptic foreign body, embedded in an organ, excites by its presence a cell proliferation in the surrounding connective tissue.

The presence of a similarly-situated parasitic cyst evokes a like response. The pressure induced by its continuous expansion, however, calls into existence an opposing factor which antagonises the tendency to cell proliferation. Thus, by a maintenance of equilibrium between irritative hyperplasia and pressure atrophy, the capacity of the capsule increases *pari passu* with that of the essential cyst. Nevertheless, it must be admitted that in certain cases all signs of irritative hyperplasia are absent, and that, just as an aseptically detached appendix epiploica excites no reaction, so an echinococcus vesicle may for a time remain naked and free.

Again, around hydatid cysts situated in well-protected parts, such as the brain, lungs, or bone, the capsule, if not entirely wanting, is represented by a condensation and survival of only a portion of the pre-existing connective tissue.

On the other hand, in more exposed situations, such as the anterior border of the liver, it may grow to a considerable thickness.

Structure.—In structure, the adventitious sac is, in juvenile cysts, both cellular and vascular. In older living cysts, it consists of fibres and flattened cells, arranged in concentric laminae, which, as the inner surface is approached, become fused, condensed, and more or less destitute of cellular elements. The inner face of a healthy sac is smooth, and of a faint blush colour, but I have not been able to satisfy myself as to the existence of an internal cellular layer, as has been described. So, also (though in young cysts a certain amount of capsular vascularity may be noticed), Adelaide surgeons have not observed the varicose condition of the capsular vessels that has been stated to give rise to dangerous and even fatal bleeding after removal of the essential cyst. Indeed, this event, beyond a slight hæmorrhagic leakage, has been conspicuously absent from their experience. Dangerous hæmorrhage is from the extra capsular tissues, more especially when the cyst is located in the spleen.

Shape.—The shape of the sac, to which that of the enclosed parasite corresponds, in virtue of the internal pressure to which it is subject, tends to assume a spheroidal form. When, however, its uniform expansion is interfered with by inequalities in the density of the surrounding tissues, it acquires a more or less irregularly sacculated shape.

If the mutual pressure of adjacent parasites upsets the equilibrium between hyperplasia and atrophy in the intervening partitions, the sacs coalesce into a compound sacculated capsule, in which a separate parasite occupies each pouch. When the unequal resistance of surrounding parts is supplemented by a special inherent tendency of the parasite to grow in certain directions, a compound sacculatation, extending even to separation, ensues, such as is seen in the multilocular form (of which we have a good specimen from the liver of a bullock).

EXTRA CAPSULAR EFFECTS OF THE GROWTH OF THE PARASITE.

The connective tissue of the viscus survives the more highly organised parenchymatous elements, such as the liver cells, &c., but in the uninvaded parts the latter undergo a compensatory hypertrophy. When the growing parasite comes to abut on the serous capsule of the infested viscus, a fusion of its own adventitia with

the latter takes place, and this combined structure may become further adherent to other neighbouring serous surfaces.

DEGENERATIVE CHANGES IN THE CAPSULE.

With increasing age, the adventitious sac is apt to undergo degenerative changes. These may be of an aseptic character, such as sclerosis, or even calcification, due to the deposition of lime salts (phosphate and carbonate), or the latter condition may lead to the formation of foci, of a degraded form of bone. Usually these changes do not affect the capsule uniformly, but occur in patches of various size, and may lead to enormous thickening. In a recent case of splenic hydatid at the Adelaide Hospital, this calcareous and, to some extent, osseous transformation had proceeded to such a degree that the use of a small saw was necessary to effect an opening.

So, also, changes of a septic character may take place either spontaneously, from unexplained causes, or as the result of surgical interference. Thus we may have suppuration, ulceration, putrefaction, with the evolution of gas, and even shrouging of the whole sac.

The term "sac" is apt to be misapplied to the hepatized lung, limiting a suppurating echinococcus cyst, or to the sclerosed zone surrounding obsolete ones which have died aseptically.

Again, a detachment *en masse* of the lining of blood-stained exudation which forms in the cavity from which a living, non-suppurating cyst has been surgically extracted, can hardly be called "sloughing of the sac," inasmuch as the capsule of a living pulmonary echinococcus is represented by a transparent "serosa-like" film, which only acquires the characters of a fibrous capsule where the parasite comes to abut on the surface of the lung, and localized pleural adhesion is imminent.

Purulent granulations referable to septic conditions in hydatid-containing cavities in bone, for the same reasons, hardly deserve the term "sac" or capsule, &c.

Being a product of the connective tissue of the host, the capsule may be invaded by pathological changes affecting the viscus in which the parasite is embedded, and in this way it has been observed by Thomas to be affected by carcinomatous and lardaceous disease.

THE ECHINOCOCCUS BLADDER OR ESSENTIAL CYST.

The lamination of the elastic cuticle or ectocyst, a characteristic feature of the bladder-worm, even at a very early stage, becomes with increased age still more conspicuous by the formation of fresh layers till it may, in the mother cyst, reach a considerable, though not necessarily a uniform, thickness. So characteristic, indeed, of hydatid cysts is this structure that the discovery of a minute fragment, which, in the absence of all other definite products, may be obtained by the hypodermic needle, renders the diagnosis absolutely certain. As to its chemical composition, it is sufficient here to say that it belongs to the class of substances known as chitinous, nor is it necessary to speak further of the physiologically important parenchymatous or germinal layer.

HYDATID FLUID.

The fluid which occupies the interior of both mother and daughter bladders, and which keeps their elastic walls at a considerable degree of tension, is a limpid, or feebly opalescent, neutral, liquid having a specific gravity of 1006-1015, and containing from 1-2 per cent. of solids, amongst which albumins are either wholly absent or almost entirely so. Minimal quantities of sugar, inositol, kreatin, and urea may exist with some inorganic salts, of which chloride of sodium is the most conspicuous. A poisonous ptomaine has been detected by Mourson and Schlagdenhauffen.*

In the contents of dead or dying cysts there may be serum, bile, or blood. The withdrawal of a transparent fluid, therefore, which yields to the ordinary tests no albumen, or a mere trace, and which gives a copious precipitate with argentic nitrate, affords strong evidence of its derivation from a hydatid cyst; but, from the identical appearance and reactions of some other normal or pathological fluids of the body, absolute reliance cannot, in certain cases, be placed upon these tests alone, and the detection of one or other of the biological products then becomes the only means of determining, with certainty, the parasitic nature of the tumor. Sometimes these are not forthcoming.

CAUSES OF SPONTANEOUS DEATH.

Dead hydatids are more frequently found in the liver than in other parts, both because the liver is the most frequently affected viscus and because spontaneous evacuation *per vias naturales* is less easily affected than in viscera, such as the lung and kidney.† Echinococcus cysts may die at any stage of their existence, and it is possible that, like other forms of life, they may have died because they had reached the term of their existence. As a rule, however, disturbances of the obscure relations existing between the parasite and the tissues of their host anticipate the termination of their natural life's cycle.

Several theories, all more or less unsatisfactory, have been suggested as possible causes of natural death. It is said, for instance, that mal-nutrition, induced by diminished blood supply, entails an aseptic death of the parasite, more especially when the latter has taken up its abode in the peripheral portions of an organ where the blood supply is necessarily poorest.

Irruptions and transudations of the natural fluids of the body, such as blood, serum, bile, or urine, are adduced as mechanical and toxic causes of death.

Static shrinkage of the capsule, inordinate growth of an internal brood, are said to lead to a disproportion between the carrying capacity of the capsule and the contained parasite, which is inimical to its further development.

Whatever may be the essential causes of death, however, it is probable that they are local rather than general, as the same individual may be the subject of both dead and living hydatids, and even in the same viscus there may be cysts in widely-different stages of degeneration, indicating death at different periods. Due weight must also be assigned to the suggestion that oft-repeated or long-applied traumatism, such as the continuous riding on horseback of bushmen, or perhaps even the toxic effect of the continual use of noxious fluids such as horehound tea may eventually prove fatal to the life of the parasite.

RUPTURE.

Rupture of hydatid cysts into various cavities and passages of the body, or even externally, leads sometimes to spontaneous elimination of a parasite, and a consequent cure of the host, but more often to urgent symptoms which require prompt surgical interference. In this place it is necessary to draw attention to the fact that such a serious event may take place in a healthy bladder (for instance in the lung) as the result of undue compression or other violence; or pressure atrophy, due to the expansion of the cyst, may have taken place in intervening tissues which then give way

*Compt. rend., xcv., 791.

†Out of 36 cases which, on *post-mortem* examination at the Adelaide Hospital, were found affected with hydatid disease of the liver, 10 were the subject of retrogressing cysts that had been unsuspected during life.

at the weakest spot, or, as is frequently the case, the rupture is the consequence of localized ulcerative changes that are prone to occur in suppurating cysts.

DEGENERATIVE CHANGES IN THE ESSENTIAL CYST AND CONTENTS AFTER SPONTANEOUS DEATH.

Hydatid cysts that die and undergo spontaneous retrogression become the subjects of a very constant series of degenerative changes, that may be described as occurring in the following stages.

1. *Stage of Turbidity.*—The fluid of the mother cyst becomes turbid from the precipitation of the albumens of the nutritive pabulum, which, being no longer absorbed and metabolized by the dying or dead parasite, are suspended in the fluid, and it thus becomes albuminous. A similar transudation of serous fluid and refilling of the sac may take place after tapping. Thus far there are no changes in the adventitious sac, and the contents of the daughter cysts are still clear.

2. *Fatty Stage.*—Chemical changes supervene, by which these precipitated proteids are converted into fatty substances resulting in still greater turbidity of the fluid, or, at a later period, the liquid contents may assume the consistency of a butter-like smegma. At the same time the mother cyst acquires a gelatinous or gummy aspect, while the daughter cysts shrink, and their contents in turn become turbid. It may be stated generally that, though the daughter cysts undergo precisely the same series of changes as their parent, the former are, so to speak, a stage behind the latter in their transformations.

3. *Stage of Desiccation.*—There is complete opacity and marked desiccation of the contents, which are represented by a putty-like mass. Degeneration has proceeded in the mother cyst, which has now become a mass of gelatiniform, but not yet completely opaque, shreds. The fatty transformation has extended to the formation of crystals, such as stearin and cholesterol, and less frequently of other crystalline forms of obscure nature and uncertain composition, amongst which may be mentioned Charcot's crystals.

4. *Stage of Calcareous Infiltration.*—Infiltration of lime salts (carbonate and phosphate), which has previously commenced in the adventitious capsule, now becomes general in the whole mass. The putty-like substance is slowly substituted by a semi-calcareous mass, in which are embedded the shrivelled and opaque remains of the mother and brood.

5. *Stage of Petrefaction.*—In a further stage, seldom reached, even the membranous debris may have lost their identity, the hooklets only remaining in the now wholly calcified mass to indicate the true nature of the remains.

PRESENCE OF BILIRUBIN.

In a certain proportion of cases of liver hydatids, the mother cyst, its liquid contents, and, at a later stage, the daughter cysts also, may become stained to a green or orange colour from irruption or transudation of bile, which most frequently lies between the adventitia and mother cyst, though it may be within the latter. When this is in excess it may give rise to the presence of amorphous masses of biliary matter, or of bilirubin crystals. In the one case—an enormous cyst of the liver which had commenced to suppurate—we found a mass of crystalline bilirubin, with traces of biliverdin weighing 1.13 grammes, many of the daughter cysts being stained with a similar material. So far as we are aware, this substance has not been found in cysts other than those of the liver, a fact which speaks for its biliary origin. Further, in my experience, it occurs only in those cases where the parasite is dead. In hydatids of the kidney there have been found crystalline products referable to the urinary secretion.

PULLULATION IN HYDATID BLADDERS.

Besides the above series of changes, which constitute what may be called the usual pathological sequences of spontaneous death, various observers have noticed, projecting from the inner wall of cysts otherwise apparently normal, and containing large broods, peculiar raised papilloma-like excrescences, occurring in scattered patches of over an inch in diameter, and 2mm. or more high.

Microscopically, they consist of ingrowths, rather than infoldings of the cuticle, and, in one case, they contained small daughter cysts with relatively thick walls. I have observed these papillomatous growths in cysts of the lung, liver, spleen, or brain. Probably they represent abortive efforts at endogenous proliferation. In some of these cases patches of the mother cyst were gelatiniform, and of a transparent amber colour, as if vitality was threatened.

ABSENCE OF MOTHER CYST.

Hydatids occasionally occur, with every appearance of having been developed endogenously, in which no trace whatever can be found of a mother cyst. It is difficult to understand by what processes such a substantial membrane can be completely absorbed, macerated, or dissolved, and yet this seems the only kind of explanation that can be offered. Such an example was an enormous hydatid in the liver of a male subject operated on by Dr. Stirling; the contents measured twenty pints. On a calculation, based on the actual enumeration of the daughter cysts large enough to be counted, which were contained in a measured quantity, the total number of these exceeded 28,000, and this figure did not include thousands that were too small to be counted with the naked eye. Suppuration had not long commenced, but not a shred of mother cyst could be detected. It was in this case that the crystalline mass of bilirubin was found (previously alluded to). The man recovered, and Dr. Stirling again successfully operated on him three years later for another suppurating hepatic cyst containing only five pints.

An absence, *ab initio*, of a limiting mother cyst is seen in those cases where a group of vesicles bathed in serous-looking fluid occupies either a newly-formed or a pre-existing cavity, to the walls of which they are anchored by means of a granular cement, the nature of which I have not been able to determine. Probably the plurality of vesicles is due to exogenous development, unless, indeed, there be such a thing as a hydra-headed hexacanth embryo. Professor Allen (Melbourne University) is inclined to think that, where such nests of vesicles are located in loose cellular tissues among structures subject to much mutual displacement, each separate vesicle is apt to acquire a filmy adventitia carrying fine blood-vessels. Assuming that this statement by so careful an observer as Professor Allen is correct, I am inclined to believe that the apparently nude vesicles which slip out of a surgical incision in such cases are liberated by rupture at their own point of junction with a parietal adventitia common to them all.

Let me now, gentlemen, in vacating the presidential chair to which you elected me a year ago, thank you all for the confidence you placed in me then, and for the generous support you have given me since.

From us all a special tribute is due to Dr. Corbin, our Treasurer, and to Dr. Swift, our Secretary. The latter's absence to-night, on account of a temporary illness. He and Dr. Corbin have established an unassailable official record in the history of our society. This they have done by their ideal love of work, their self-denial, and their methodical habits.

The undercurrent of regret which one naturally feels in consciously performing any congenial duty for the last time is tempered in my own case by the knowledge that my successor in this position of honour is Dr. T. K. Hamilton, a man still in the plenitude of mental power, and not yet rendered self-distrustful by defeat; one in whom there will be no hesitancy in his choice of words when his time also comes to bid you farewell.

PROCEEDINGS OF OTHER SOCIETIES.

THE WESTERN MEDICAL ASSOCIATION OF SYDNEY.

FIFTH ANNUAL MEETING.

THE fifth annual meeting of the Western Medical Association was held at the Town Hall, Petersham, on Tuesday, 16th April, 1895, Dr. McNeill (President) in the chair.

The minutes of the previous annual meeting were read and confirmed.

The Treasurer's report, which showed a credit balance of £24 17s. 1d., was read and adopted. A motion was carried by which one of the rules was so amended as to allow two secretaries to be appointed if necessary. It was also decided that the annual subscription of £1 1s. be reduced to 10s. 6d.

The Secretary then read the list of office-bearers elected for the year 1895-96:—President, Dr. Percy Moore Wood; vice-presidents, Dr. McAllister and Dr. Maguire; treasurer, Dr. Blackwood; secretaries, Dr. Coutie and Dr. Abbott; council, Dr. McNeill, Dr. Hinder, Dr. Purser, Dr. Kirkland; auditors, Dr. Peare and Dr. Kendall.

The retiring president read his address, of which the following is a resumé:—

"Gentlemen,—It now becomes my pleasing duty, upon retiring from the chair at the conclusion of my year of office, to address you, and, to the best of my ability, render to you an account of my stewardship. I have to express my thanks and indebtedness to the members of the Council who have devotedly, harmoniously, and ably worked all through the year for the benefit of the Society, with, as I venture to think you will agree, no inconsiderable amount of success.

Our membership has been steadily maintained, the finances are in a satisfactory condition, and the influence for good of the W. M. A. has extended far beyond the limits originally anticipated by the promoters; so that we may fairly congratulate ourselves upon its prospects and position.

As to our history: It will be remembered that more than five years ago a meeting was held by medical men practising in the western suburbs, with the object of promoting, by friendly combination, a better understanding among local practitioners on the subject of contract appointments, and other matters tending towards the elevation and harmony of the profession. It was then and there resolved that the Western Medical Association be formed. A constitution was decided upon, rules framed, and membership invited. The idea was heartily taken up by the profession, and the membership of the W.M.A. soon included, as it still does, practically all the general practitioners in the district, as well as a long list of honorary members who, though not personally interested, recognised and sympathised with the beneficent nature of the movement. Other suburbs followed suit and formed kindred associations, most of which are still flourishing. We may also claim the parentage (while acknowledging

the powerful and loyal assistance of other allied associations) of the "Medical Defence Union," which is rapidly becoming a powerful and effective institution. Our early years were times of struggle and difficulty, for it was never believed that medical men could be continuously loyal to an association of this nature. We, the members of the W.M.A., have, however, shown the whole medical world that the thing can be done, and, I think, may feel justly proud.

The Status of the Medical Profession.—The legal and clerical professions have for generations been bound by themselves to themselves in bonds of precedent and etiquette so universal and unassailable that they dare not be, by any individual, infringed without penalty; and, by such orthodox and unimpeachable methods, they have so far raised themselves above the general practising members of our noble profession as to command for themselves nearly all the great State prizes, honours, and emoluments granted to those distinguished in mental ability; while our profession, which gives and does more for the world and for charity, receives less remuneration, has to be content with an occasional honour; has no great State prizes open to it, no public recognition nor adequate emolument of any kind whatever. It must be borne in mind that the members of the clerical and legal professions can aspire to some great prizes, carrying with them high salaries. We must also consider that, in the law courts throughout the world, every man is paid for his services, and without payment nothing can be done, while the hospital service throughout the world is conducted by the medical profession, not at a tremendous cost, but gratuitously. When we consider these things, we are led to ask "Why?" The reply is evident—we do not combine to protect and assist.

The W. M. A., pre-eminently defensive, has never been an aggressive body, contenting itself with modest views, and adopting conciliatory measures whenever possible. It has, however, shown itself capable of making a determined and successful stand upon occasions in which it was thought that the bounds of toleration and propriety had been exceeded in the conditions sought to be imposed upon its members. It now stands firmly as a recognised and permanent institution, although regarded at first with some suspicion by the powerful Friendly Societies and labour organisations. The Western Medical Association has to such an extent gained the respect and confidence of those influential and strong combinations that, upon occasions in which tenders were received by local lodges from medical men who were not members of the W.M.A., the lodges have declined to receive them unless the applicant joined the Association; the lodges freely admitting that it was better for them to pay a little more for the services of a surgeon who was in harmonious touch with all his medical neighbours than to trust solely to one who would be at variance with them.

I can further confidently assert that the position of every general practitioner within our district has been materially improved by the operations of the W.M.A., which is high praise. I am also happy to be able to point out that no spirit of antagonism whatever exists between the various Friendly Societies and the W.M.A., but that, on the contrary, your Council hears from all sources that these powerful bodies, in a majority, are in cordial accord with its aims and objects, which they freely admit to be fair and reasonable.

The Western Medical Association has privately and successfully settled a good many disputes and differences among its members, chiefly through interviews and confidential arguments by delegates from the council, to which body the matters in question had been

referred. It has assisted other cognate bodies in discouraging the lowering of professional status, by advertisement or otherwise, with no uncertain voice and no small effect. It has, by inaugurating a system of informal periodical social meetings of its members, brought men together "in peace, order, and harmony" who might otherwise never have learnt to know each other's value, and has thus afforded them the opportunity of explaining to each other those many little misunderstandings so inevitable to so-called "opponents;" in fact, has converted numerous "opponents" into "colleagues." The great fault in most medical meetings, looked at from the standpoint of the work-weary and jaded men who constitute the vast majority of our wearying profession, is that the intellectual treat afforded by the hearing of cases recorded, speeches of leaders, and scientific exhibits—though necessary and enjoyable—is not a mental rest, and is not, as a rule, followed by that social intercourse and mental relaxation which a work-weary man desires and deserves after his day's labour. This want our meetings endeavour to supply.

The new Medical Bill now before Parliament must be regarded as a means to an end. It is in the hands of an able man, who doubtless appreciates that we must creep before we walk, and is better acquainted with the "lions in the path" than outsiders can be. I believe that most of us think that we can safely trust him to do the best that any man can for the profession.

The purchase of the *Australasian Medical Gazette* by New South Wales Branch of the British Medical Association is a new and bold departure, which shows spirit and promises well. The action of our brethren in other colonies of the land of the Sunny South, in supporting the movement, does credit alike to their federal spirit and to their appreciation of their own dignity and that of the profession in the colonies. The annual medical dinner, which shortly eventuates, is also indirectly the result of our efforts at general combination.

The condition of our professional brethren in Ireland, as related in the *B.M.J.*, deserves recognition. They have at last been driven to the wall through lack of combination, but have now turned at bay, and are being generously and largely supported by the profession. The City of Cork is the centre of activity at present, but the movement will spread, and it must be considered a certainty that the movements so successfully inaugurated and maintained by the Alumni (their confreres) from Ireland, as well as Scotland and England, will be watched with sympathetic and emulative interest from the other side of the globe. We may fairly take it to our credit that we are now—in this matter at all events, as well as, we think, in some other things—leading, instead of following, those confreres we left behind at home when we followed the cross of the South.

The day will come when we, of the noblest and greatest profession upon earth, now torn by internecine dissension, crippled by divided interest, scorned and neglected by the State, miserably remunerated (although we are wholesale and gratuitous benefactors of humanity), smiled at by our brothers of the Church and the Bench for neglecting our material interests as they have *not* done, will be able to say to our pastors and legal advisers:

Your standing is to mine
As the moonlight is to sunlight,
And as water is to wine.

Thanking you for your courtesy, and hoping that we

are really beginning to learn that union is strength, even at this, the eleventh hour, I now leave the chair I have had gratified honor in occupying, and induct a successor—in the person of Dr. Percy Moore Wood—who, I am perfectly confident, will do credit to the position, and conserve the interests of the Association in every way.

Dr. McNeill then vacated the chair, which was taken by Dr. Wood. Dr. Maguire proposed a hearty vote of thanks to the retiring president for his address, and also for his services during the past year; this was seconded by Dr. Blaxland, and carried with acclamation.

MEDICAL SOCIETY OF QUEENSLAND.

THE 102nd general meeting of the Society was held on June 11th, 1895, in the Society's rooms. Present: Dr. Hill (President), Drs. Wheeler, Ure, Lawes, Lillian Cooper, Orr, Love, Fullerton, Francis, Ashworth, and Turner. Visitor, Dr. Wellford.

Dr. LOVE showed a case of extreme antero-posterior curvature of the tibiae, with slight lateral curve and marked thinning of the shaft laterally, in a boy aged 13 years. He considered the condition due to rickets, and compared it with some cases described by Dr. Gardner in the last *Intercolonial Quarterly Journal*, under the name of platycnemism.

Dr. TURNER agreed as to the rickety nature of this case, but did not think it corresponded with Dr. Gardner's description.

Dr. HILL had seen in England much more anteriorly curved tibiae in a rickety dwarf. He had also seen similarly curved tibiae in Brisbane, which he considered to be due to rickets. He doubted whether there was sufficient justification for regarding platycnemism as a distinct disease.

Dr. LAWES showed an aorta, with the valves in an extreme condition of calcareous degeneration.

Dr. LAWES then read "Notes on cases of gunshot wound," and "Notes on a case of phosphorus poisoning."

Dr. WELLFORD related a case of a child of 18 months, who had sucked off the heads of 13 matches. It was treated with copper sulphate, and the stomach was washed out within two hours. Subsequently, a 1 per cent. solution of permanganate of potash was administered at frequent intervals. The child recovered without showing any symptoms of poisoning.

Dr. LOVE, referring to the chemistry of the action of the poison and its antidotes, stated that the composition of ordinary lucifer match heads was yellow phosphorus, sulphur, and chlorate or nitrate of potash. After the first local irritant effects, caused by the presence of the phosphorus, had passed off, it is absorbed unchanged into the blood, producing in a few days the well-known fatty degeneration of vessels and organs. The treatment is with emetic doses of sulphate of copper, which also, perhaps, forms some insoluble black cupric phosphide (Cu_3P_2), and with turpentine (oxidised, if possible), which forms terebinthino-phosphoric acid, which is comparatively harmless. From the readiness with which phosphorus is oxidised, and the ease with which permanganate of potash parts with its oxygen, the suggestion of treating cases of acute phosphorus poisoning with permanganate of potash was theoretically sound, provided that the stomach was washed out previously, so that the permanganate would not waste its oxygen or organic material contained in it.

Dr. URE had seen several cases of poisoning by phosphorus. In one of the worst cases the prompt

administration of copper sulphate to emesis, followed by turpentine, resulted in bringing about recovery. He had also seen a case of necrosis of the lower jaw after eating matches.

Dr. TURNER remarked, with reference to the case of gunshot wound of the bladder, that it was surprising that there was no extravasation of urine. If he had known that the bullet was in the bladder he would probably have performed perineal cystotomy to remove the bullet, and allow free drainage. No doubt the smallness of the bullet—it was a mere pellet—and an oblique course through the muscular coat of the bladder were the causes of the absence of extravasation.

Dr. ASHWORTH gave the following figures regarding the cases of diphtheria at the Children's Hospital treated with serum:—The total number of cases up to date was 36; of these eight had died, and 28 recovered. Two of the deaths had occurred within 24 hours of admission. In 21 of these cases the larynx was implicated; among these there were eight deaths and 13 recoveries. In 16 cases intubation or tracheotomy was performed, and of these seven died (two within 24 hours of admission) and nine recovered. Bacteriological examination showed the presence of diphtheria bacilli in 30 cases; in 6 the result of the examination was negative. Albumen was present in the urine in 19 cases, not found in 11 cases, not examined for in six. In three cases cutaneous rashes were observed on the 7th, 11th, and 14th day after injection—all after treatment with Ruffer's serum. One case complained of pains in the limbs on the 14th day after an injection of Behring's No. 1.

Dr. ASHWORTH also read the notes of two cases which ended fatally. The first was a septic case, with extensive nasal disease and abominable fetor. In the second there were extensive pulmonary lesions at the time the child was admitted, with extensive faucial membrane, and laryngeal stenosis.

Dr. TURNER drew attention to Widerhofer's results (*Deutsche Med. Wochens.*, 1895), in which the mortality in 100 cases was 25.5 per cent., as against 34.2 per cent., 39.8 per cent., and 44.6 per cent. in previous years. Widerhofer had no doubt of the favourable effects of the serum, when injected within the first three days of the disease, but was more doubtful of its efficacy in a later stage; he had never seen any harmful effects from the injection. Dr. Turner then referred to a *post-mortem* bacteriological examination he had made in Dr. Ashworth's second case. All membrane had disappeared from the air-passages. Cultures from the bronchial secretion showed streptococci in large majority, also many diphtheria bacilli, with a few colonies of staphylococcus aureus and of a white torula. From the pneumonic exudation were cultivated large numbers of diphtheria bacilli and pneumonia diplococci. Both of these were distinguishable in a smear preparation of the exudation; many of them contained inside phagocytic cells. From a more recent patch of pneumonia a pure culture of pneumonia diplococci was obtained. This was evidently a case of multiple secondary infection.

Dr. LOVE related a case in which, three weeks after injection of serum, there was an attack of joint-pains, accompanied by swelling, and an extensive papular rash. Could this have been due to the serum, or might it be a case of dengue fever?

Dr. ASHWORTH had seen rashes develop on the eleventh and sixteenth day after injection. Another case had some rise of temperature and pain in the thighs, with tenderness, on the fourteenth day.

Dr. HILL remarked on the importance of recording the day of the disease on which the treatment was commenced, and the exact dosage employed. We were in great need of careful observation on these cases, and he thought the experience gained at the Children's Hospital would be very valuable.

NEWCASTLE MEDICAL SOCIETY.

The annual meeting of the above Society was held at the Newcastle (N.S.W.) Hospital on the 14th March. Present—Dr. Stapleton (in the chair), Drs. Nickson, Cribb, Harwood, Smith, Hester, Treloar, Ludlow, Kames and Beeston, hon. sec. Dr. Miles was present as a visitor. The minutes of the last annual meeting were read and confirmed. The hon. secretary then read the following report:—

SECRETARY'S REPORT.

In presenting the report for the past year I must congratulate the members of the Society on the work done. Though two of our meetings lapsed through pressure of professional work, still the average attendance of members was good, and quite up to our usual average. During the year papers were read by the following members:—Dr. Cribb, Notes on Abdominal Section; Dr. Nickson, Thoracic Aneurism; Dr. Stapleton, Fracture of Clavicle; Dr. Beeston, Hydatids; Dr. Beeston, Placenta Previa with Ascetic Fetus; Dr. Nash, Vesicular Mole; numerous pathological specimens were exhibited by Dr. Cribb. During the coming year it is hoped that all our members will make it a point to read papers at our meetings. For it must be conceded that, amongst the many cases necessarily met with in hospital and private practice, there must be many of the utmost interest to the profession, the recording of which, if done daily, gives very little extra work, whilst the results are of the greatest benefit to us all, individually and collectively. Many cases which may appear obscure, or perhaps of slight importance, when brought before the Society, either in the form of a paper or by notes, and candidly criticised or commented upon, become interesting as well as instructive. Therefore, we trust that members will exert themselves during the coming year, even more than in the past, and by increasing the number of papers, and the regularity of their attendance, make our meetings events to be looked forward to with pleasure. The Society possesses a number of "Lancets," "Practitioners" and other journals, the gift of Dr. C. W. Morgan. These are all bound, and only await some suitable place for ready reference. It is, therefore, suggested that a set of shelves be put in the Medical Staff Room, so that they may form the nucleus of a library belonging to the Society, and members may see their way towards adding to them out of their private collections. I should propose that any member having back numbers of journals for which he has no immediate use should give them to the Society, when they could be bound and go towards increasing the library. We regret to announce that during the year the Society has lost two members—Dr. Rose and Dr. Kane.

The election of officers was then proceeded with, and resulted as follows:—President, Dr. Nickson; vice-president, Dr. Hester; secretary, Dr. Beeston; treasurer, Dr. Cribb. The retiring president, Dr. Stapleton, then read an address on "The Medical Knowledge of Shakespeare."

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE seventh session of the above Association will be held in Sydney, from the 3rd to the 10th January, 1897, under the presidency of A. Liversidge, M.A., F.R.S., Professor of Chemistry, University of Sydney.

The presidents and secretaries of the sections are as follows:—

ASTRONOMY, MATHEMATICS AND PHYSICS.—R. L. J. Ellery, C.M.G., F.R.S., Government Astronomer, Victoria, President; R. Threlfall, M.A., Professor of Physics, and J. Arthur Pollock, B.Sc., Demonstrator in Physics, Sydney University, Secretaries.

CHEMISTRY.—T. C. Cloud, A.R.S.M., F.C.S., Manager Wallaroo Copper Works, South Australia, President; W. M. Hamlet, F.C.S., F.I.C., Government Analyst, N.S.W., Secretary.

GEOLOGY AND MINERALOGY.—Captain F. W. Hutton, M.A., F.R.S., F.G.S., Director of Canterbury Museum, and Lecturer in Geology, Christchurch, New Zealand, President; T. W. E. David, B.A., F.G.S., Professor Geology and Physical Geography, Sydney University, and E. F. Pitman, A.R.S.M., F.G.S., L.S., Government Geologist, N.S.W., and Lecturer in Mining, Sydney University, Secretaries.

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MENTAL SCIENCE AND EDUCATION.—John Shirley, B.Sc., District Inspector of Schools, Brisbane, Queensland, President; Francis Anderson, M.A., Professor of Logic and Mental Philosophy, Sydney University, Secretary.

Communications and papers for the meeting, or inquiries, may be addressed to the Permanent Hon. Secretary, the Chemical Laboratory, the University, Sydney, N.S.W.

THE *A. M. Gazette* will, in future, be published on the 20th of each month, owing to the proceedings of the other branches of the B.M.A. not reaching us in time to enable us to publish the *A. M. Gazette* on the 15th of each month, as heretofore.

NOTICES.

All communications intended for publication may be addressed "The Editor, *Australasian Medical Gazette*, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

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THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, JULY 20, 1895.

EDITORIAL.

THE DEAN CASE.

THE case of Reg. v. Dean has now resulted in a pardon being granted to George Dean, owing to the report of the Royal Commission, which was appointed to further enquire into the case after the sentence of death, passed at the trial at Darlinghurst in April last, had been commuted to one of penal servitude for life.

On this Commission the Government very rightly engaged two of the most distinguished members of our profession, Dr. P. Sydney Jones and Dr. F. Norton Manning; while they gave the position of President to an eminent barrister, Mr. Rogers, Q.C., of large experience in criminal law. The wisdom of selecting two physicians for this purpose is shown by the results; for the report is not unanimous; and, whereas the two medical members of the Commission agree in seeing a reasonable doubt of the prisoner's guilt, partly owing to a complete absence of all evidence of the alleged strychnine poisoning, the President, who was not in a position to appreciate the significance of the medical evidence, rests his ground of dissent upon the improbability of a girl, on the threshold of life, for the sake of bringing a charge against her husband, risking her existence by taking a "deadly dose of irritant poison." The President thus shows that he failed to see that there was no evidence that any quantity of arsenic was taken larger than small poisonous doses.

This fact must have been apparent to the other members of the Commission.

This case presents many points of importance to the medical practitioner, especially in respect to the difficult position in which he may be placed when his obligations to the State as a member of society are added to the duties he has undertaken as medical attendant. The limits of this article do not admit of a discussion of the case in all its medical aspects; it is proposed merely to review some new matters of medical interest which have arisen.

It was alleged that strychnine and arsenic in combination were used to effect the criminal purpose; and at the trial, when the exact details of the evidence were not so thoroughly investigated as they were at the later enquiry, it was suggested that there might exist an antagonism between strychnine and arsenic, whereby medicinal doses of strychnine may possibly have served to counteract the depression due to arsenic, and so have masked some of the prominent symptoms usual in arsenical poisoning. At the latter enquiry it was further suggested that the tetanizing effect of strychnine might also have been concealed by the action of arsenic absorbed. Both these theories fell to the ground; partly owing to the report of Dr. Charles Martin, of the University of Sydney, whom the Commissioners very properly engaged to carry out a series of experiments to determine the points in issue, and partly owing to the fact that it was made apparent by the defence that the former theory—which, by-the-by, through a misapprehension, helped originally to convict the prisoner—was not applicable to the circumstances of the case. If strychnine had been used in suitable quantity, and at the appropriate time, it might have served to justify the application of the former theory, and would have provided clinical evidence to support the conclusion of Dr. Martin, that “when strychnia is introduced before any decided depression has been produced by the arsenic it occasions (as is the case in the normal animal) a small increase in the original blood pressure.” Unfortunately for the science of toxicology, this case does not help us, because there were so many circumstances of suspicion surrounding the only “exhibit,” namely, the lemon syrup, which was alleged to have been taken, and to have contained strychnine and arsenic, and in respect of which the theory would be capable of being applied; and because, according to calculations based upon the analysis of the lemon syrup and the facts in evidence, a tetanizing and not a tonic dose of strychnine must have been taken, if the facts were true.

There are other cases on record in which strychnine has been used in addition to other drugs for homicidal purposes. In *Reg. v. Cross*, tried in Cork (*British Medical Journal*, December, 1887), the evidence pointed to the continuous use of poisonous doses of arsenic until extreme prostration was produced, and then a resort to strychnine to finish the work. In the famous Palmer trial (1855), for the murder of Mr. Cook, antimony was employed to produce the illness, and, when a local practitioner had given a diagnosis of cholera, pills believed to contain strychnine were given, upon which tetanic spasms ensued, ending in death. It seems that both of these were cases of death from strychnine in persons previously made ill with other drugs, and the amount of strychnine used was probably too large for any question of antagonism to apply. Stevenson, in *Taylor's Medical Jurisprudence*, vol. I., p. 499, 4th ed., refers indirectly to a case of poisoning with strychnine and arsenic, on which Vella made an observation to the effect that strychnine and arsenic might be mutually antagonistic; but adds that an opinion based on this does not accord with observations made on warm-blooded animals with a mixture of arsenite of potassium and strychnine, whereby the tetanizing action of strychnine was not prevented, provided the alkaloid was given in poisonous doses. Dr. Martin's report confirms this. The outcome of the investigation of the question of the presumed antagonism is this—that in future cases of poisonous arsenical symptoms strychnine may be used with some hope of benefit, provided no decided depression has been produced by the arsenic. Its utility will, therefore, be limited to a very small number of cases.

Dr. Martin's report shows:—

(1) That arsenic is quite unable to mask the poisonous action of strychnia, either when they are both administered together by the mouth, or when the strychnia is introduced directly into the circulation of an animal already suffering from the effects of arsenic.

(2) That when strychnia is introduced, before any decided depression has been produced by the arsenic, it occasions a small increase in the original blood pressure, but that once the depression due to arsenic is at all pronounced strychnia is quite unable to counteract this depression.

This is the first occasion on which, it seems, the existence of multiple and symmetrical peripheral neuritis has figured in a criminal enquiry. Here it served to establish the previous diagnosis upon which the criminal charge was based. Gowers (*“Nervous Diseases,”* vol. i., page 115, 2nd ed.) anticipated that such a condition was likely to be

of importance to the medical jurist. The form of the neuritis and the time of its occurrence, together with the concomitant signs of (1) a falling out of the hair, (2) a questionable localized pigmentation of the areolæ of the breasts and of a scar caused by friction of the corset, and (3) a linear white streak across the finger nails, indicating an impairment of nutrition some two or three months previously, satisfied the Commissioners that the diagnosis of arsenical-poisoning was correct.

An attempt was made by the defence to show that all the symptoms of the illness of March 4th onwards, and the subsequent peripheral neuritis, might have been due to influenza of the gastro-intestinal type, and that, in the absence of reliable specimens of excreta, further evidence than that before the Commissioners was necessary to confirm the diagnosis of arsenical-poisoning; and thus the question of the original illness came to some extent to depend upon the differential diagnosis of the subsequent peripheral neuritis. This part of the case illustrates the great difficulties that may arise when a medical attendant, who has been called upon to take the position of a medical jurist, has not had the good fortune to procure all the materials necessary for establishing a diagnosis strongly enough to satisfy a court of law. Here, in fact, supplementary evidence was brought from some of the more remote recesses of pathological learning. Stevenson (ib., p. 210) relates an instance where, in an arsenic case, the evidence of certain vomited matters which contained arsenic was not admitted because the medical man had left them in the custody of two women, who had allowed them to remain exposed in a room accessible to other persons. And, in another instance, the analysis of some suspected liquids was not allowed in evidence because the practitioner in the country had sent them to town by a carrier to be analysed without properly sealing the vessels.

LETTERS TO THE EDITOR.

LEPROSY IN MADEIRA.—A CORRECTION.

(To the Editor of the *Australasian Medical Gazette*).

SIR,—In a notice of Dr. Goldschmidt's work on this subject, which appeared in the *Gazette* last January, I represented the author as having said that Madeira was already inhabited at the date of its occupation by the Portuguese. In this I was wrong. He said quite distinctly that at that time the island was not inhabited. I wish, therefore, to tender my apologies to him and to the readers of the *Gazette* for this carelessness, and to remove as far as possible any consequences the error may have had.

Having once written this mis-statement, unfortunately,

I repeated it, and even made some use of it in a further paper which appeared in these columns during March. To this it almost suffices to draw attention, for the mistake had but slight bearing on the thesis then supported; disproof requiring that some area should be pointed out on which a people were known to have lived leprosy-free for long before leprosy began to appear among them subsequent to a known importation of lepers. Still, it may as well be remarked, that although under the circumstances of this case it appears more probable that leprosy should have been maintained in Madeira by communication with lepers as long as it is viewed apart from all others, yet the general epidemiology of lepra seems to point to inadequacy of this cause to explain the phenomena of maintenance in general, as at present thought to be known.

Nevertheless, this is not a universal opinion. Several authoritative writers rely on communication with the sick for explanation of maintenance, and some of them on comparative rarity of personal susceptibility to account for apparently contradictory observations. Besides this, it is always possible that many of the latter might perhaps be corrected and disappear, were the whole of the facts concerning particular isolated leprosy areas more often discoverable.

J. ASHBURTON THOMPSON.

July, 1895.

THE LEA FUND.

(To the Editor of the *Australasian Medical Gazette*.)

DEAR SIR,—At a meeting of the Executive Committee of the "Lea Fund," held last night at the residence of Dr. Faithfull, it was decided to close the subscription list.

It was also decided that, should there be any surplus after paying all expenses connected with the object of the fund, that the same should be handed over to the Treasurer of the Medical Defence Fund.

As the response to this fund has not been as liberal as one wished, the surplus (if any) will be correspondingly small.

Faithfully yours,

SYDNEY JAMIESON, Hon. Sec.

157 Liverpool Street, Sydney, July 3, 1895.

MEDICAL ETHICS.

(To the Editor of the *Australasian Medical Gazette*.)

SIR,—Yesterday evening a man called in, asking me to see his wife. He said, first, it was a miscarriage; second, that Dr. B. had attended for some days; third, that he had just seen Dr. B., and told Dr. B. that he wished him to stop attending, as he intended asking me to attend; fourth, that Dr. B. wished to see the patient with me; and fifth, that I could please myself whether Dr. B. came or not, but he wanted me at once, as his wife was bad.

At my request he drove to Dr. B.'s., and we saw the patient together.

Dr. B. asked the man to drive us up this morning, but he telephoned me to go up, and said he was not able to see Dr. B. at his office, but had left a note or message that he wished me to attend without Dr. B. Immediately after, Dr. B. sent me a message asking me to see him before I saw the patient. On calling, he said it was medical etiquette that both attend in consultation till the woman was out of danger, and that I ought to inform the husband to that effect, and decline to attend unless he did also. I disputed the

point, but, out of courtesy to Dr. B., saw the husband, and, as he did not want both, I declined to attend.

If Dr. B. is right, then what I have been taught and acted on is wrong; so I ask you to write your opinion, and that of some of the Sydney men, as Dr. B. says that is how they work.

I hold a patient can change a doctor during an illness just as a doctor can throw a case up; but the new attendant ought to see or communicate with the previous one, or request to see a receipted account to date; or, in urgent cases, make sure that he has received notice from the patient's friends that he is requested to stop attending.

I personally have had experience of the annoyance of patients wishing to change, but have stopped attending—in one case in which Dr. B. was called into consultation—without being asked to stop attending. So (though probably a third doctor is by this time in attendance on the case on the grounds I hold) I want your opinion, and if mine is wrong will act, as I have done this time, out of courtesy to an older practitioner.

Yours truly,
M.D.

Broken Hill, June 2nd, 1895.

[We consider that M.D. acted with extreme courtesy to Dr. B., and if the surroundings of the case had been clearly explained to Dr. B. this meeting should not have been considered a consultation, but a friendly meeting to enable Dr. B. to graciously hand over the case to M.D.—ED. A.M.G.]

LIFE ASSURANCE.

(To the Editor of the Australasian Medical Gazette.)

DEAR SIR,—A life assurance agent, for whom I have done a good deal of examining, asks me for half-a-crown for every case he brings me, and also for the same for every case he ever has brought me, plainly hinting that if I do not he will bring a man from a neighbouring town to examine for him, as this man will give him the sum named, and more. On my asking him if his society is aware of this system of black-mailing, to my intense surprise he replies that it is well known. The directors and secretaries must be extremely short-sighted if they allow this sort of thing to go on. There is a wise provision by which agents are paid nothing for cases the medical man does not pass, and this provision is entirely defeated by the black-mail system. For by it (black-mail) the agent can solace himself with half-a-crown or five shillings, as the case may be, and the swindled society must pay a guinea for every broken-down wreck or abortion that the agent might persuade to present himself before the doctor. Of course this system has sprung up from the miserable pay the agents get, for it is quite new to me, and I have seen a good deal of life assurance examining. But it strikes me that if the directors and secretaries think they are economizing in the matter of agents' fees, they will find it balanced by a surprising increase in doctors' fees.

A guinea is certainly good pay for an every-day examination, and I always thought this was kept up to ensure conscientious examining on the part of the doctor, such being the frailty of human nature. If, therefore, the doctor has to hand over a substantial slice of his guinea to the agent, it might be wildly possible that he would become less scrupulously conscientious in his examinations than he was before. What do you think, Sir?

I am, yours truly,
MEDICAL REFEREE.

A CURIOUS SKIN AFFECTION.

(To the Editor of the Australasian Medical Gazette.)

SIR,—Under the above heading Dr. McAdam describes a rare skin affection which he names "Epidermis Hypertrophica." As the case has failed to be classified under the head of any known disease, I may be pardoned if I point out that the disease described is a rare condition known as Tylosis palmæ et plantæ. The affection has been described by the Germans and several English writers on skin diseases. The characters of the complaint are just such as noted by Dr. McAdam. Dr. McAdam makes no mention of the family proclivities, as in most of the cases reported heredity is a marked feature, cases occurring in members of a family for as many as four generations. The disease is also supposed to be congenital, or appearing very shortly after birth, excited, no doubt, by pressure in walking and crawling. For those interested, the following references may be useful:—Bulkeley, "Archives of Dermatology," 1879; Thost, "Diss. Heidelberg," 1880; Fox (G. H.), "Journ. Cutan. and Vener., Diss. iii.," 1885; Crocker, "Brit. Jour. Dermat. iii.," 1891.—Yours, &c.,

WALTER FOX.

Narandera, N.S.W.

REVIEWS.

THE PHYSIOLOGY OF THE CARBOHYDRATES: THEIR APPLICATION AS FOODS AND RELATION TO DIABETES: By F. W. Pavy, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians, Consulting Physician to Guy's Hospital, London. J. and A. Churchill, 1894.

AWAY back in the good old days—when a medical student could obtain his diplomas in three years, or less, of more or less perfunctory study and dilatory attendance at lectures, that profited him but little, even if he listened to them most attentively—there was one particular physiologist whose name had to be remembered with painful accuracy, also the particular function of the liver which he was the first to discover and invent a name for. That man was Claude Bernard, and the function connected with his name was "the glycogenic function of the liver." Our readers will gasp when they hear what it is our painful duty now to proclaim—namely, that the idol is shattered, and that there is no longer such a function as the one named appertaining to the liver; and the name of the man who, after a lifetime of laboratory work, has brought about this "debâcle," is F. W. Pavy.

In his preface to the work under review, our author says:—"A life's labour, attended with unceasing laboratory work, has been devoted to the attainment of the knowledge that has been acquired." The results are embodied in a handsome volume of close on 800 pp., in which will be found some of the most profound physiological investigations ever undertaken by one man, with their logical deductions reasoned out in the most convincing manner. The notions concerning the position of the carbohydrate principles have been based upon a fallacious foundation, owing to the glycogenic doctrine having conducted the mind in the wrong direction. "Through the recognition of the glucoside constitution of proteid matter, a clue was given which has led to the discovery of what I venture to regard as the true key of the situation," is what this modest investigator has to say about his great discovery. The

practical point of most interest to pathologists is that diabetes is due to a faulty disposal and defective assimilation of carbohydrate matter. Healthy urine contains a certain amount of sugar, the amount being in proportion to that existing in the blood.

"In health the capacity exists of stopping the onward progress into the general circulation of the sugar derived from ingested carbohydrates when the ingestion stands within ordinary limits." On the contrary obtaining, the excess is found in the urine. But we have not space to enter into all the interesting matter connected with this disordered physiological function, not now a *pathological* affection, so can only recommend our readers to get the book without delay, and read therein the results obtained from the study and analysis of the urine of 2,642 diabetic patients; no practitioner should attempt to treat diabetes henceforth without having studied Pavy's latest and obviously best work.

DR. DE LION, Clairvoyant: Confessions of a vagabond life in Australia, as narrated by Maiben Brook.—By Samuel T. Knaggs. Sydney: Angus and Robertson. 1895. Price, 1s.

In this little volume of 200 pages Dr. Knaggs treats upon "the subjects of medical clairvoyancy and quackery as the pernicious outcome of certain defects in medical legislation in the colony of New South Wales." From the meeting of Dillon, *alias* Dr. de Lion, and his companions, in the opening paragraph, through the thirteen chapters which narrate the story of Dillon's life, his adventures in New Guinea, how he became a clairvoyant, and on through a series of well-narrated incidents to the sensational denouement in the last chapter, the interest of the tale is well sustained. There is truth in the following extract from chapter IV., which our politicians might consider seriously:—"Business men and lawyers are strictly protected as regards their property and professional privileges, but they and the general public are afforded no protection whatever against ignorant pretenders who tamper with the lives of her Majesty's subjects by their ignorant pretensions in the healing art. Indeed, the law protects such persons; for, whereas if a qualified practitioner commits a blunder and duly kills a patient through malpraxis, he can be punished as a criminal, because he is supposed to know his business, and should have done better. The unqualified quack, who is not only tolerated but encouraged, is let off scot free, because, being ignorant of even the ordinary rudiments of medical craft, he is judged by the light of his want of knowledge and skill, and the judge will direct the jury that he (the prisoner), having acted for the best to the extent of his ignorant ability, is thereby entitled to a verdict of 'Not Guilty.'"

Medical men will find the book specially attractive.

THE PHARMACEUTICAL AGENCY OF PARIS.—The manager informs us that he has transferred to *Julius Levy*, Sydney and Melbourne, the business management of all the Proprietaries connected with this agency. We also draw the attention of our readers to several of these French preparations advertised in the *A. M. G. Advertiser*, and we mention more particularly Dr. Vivien's Wine, prepared with *Cod Liver Extract*; Le Perdriel's Effervescent *Lithia and Antipyrine*; Dr. Gressy's *Fucoglycine*, prepared from seaweeds; Le Huby's Empty *Capsules of Gelatine*; Dr. Franck's Genuine *Grains of Health*; Prunier's *Neuro-sine* (composed of soluble Phospho-Glycerate of Lime); Chaumel's Ovuiles and Suppositories; Quina Laroche and Cognet's Capsules and Iron Pills.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during May to every 1,000 of the population was 2.55, and of deaths 0.96; ninety-one deaths occurred in public institutions. The deaths of children under five years age during the month were 173, or 42.20 per cent. of the total, 121 being under the age of one year. Eight deaths of child-bearing women took place during the month, or one death of a woman to every 135 births recorded.

On the 31st December, 1894, there were 40 lepers in the Lazaret at Little Bay, near Sydney, including five new patients admitted during the year. Two of these were Australians, one a German, another an Indian, and the last a native of New Caledonia. One of the white lepers died during the year. The total number of patients admitted since 1883 is 55, six of whom were females and natives of New South Wales. Their nationality was as follows:—Natives of New South Wales, 15, of whom 4 have died; Queensland, 1; China 29, of whom 10 have died; India, 2; West Indies, 1, who was discharged in 1885; Java, 1; England, 1; Fiji, 1; Solomon Islands, 1; New Zealand, 1; New Caledonia, 1; and Germany, 1.

WE regret to have to record the death of Robert Charles Badham, M.R.C.S. Eng., L.R.C.P. Lond. 1892, late of Mossman's Bay, who died at Paris on June 21, at the early age of 28. The deceased was the youngest son of the late Prof. Dr. Badham, of the Sydney University.

ALLAN CAMPBELL, L.F.P.S. Glas. 1885, a colonist of 54 years standing, and a very old resident of Yass, was killed in a buggy accident at Calabash Station, near Marengo, on June 12th. The deceased gentleman fell on his head, and his neck was broken, death being instantaneous. He was 81 years of age.

WE much regret to have to record the death of William Sinclair Dobbin, M.B. et Ch.B. Dubl. 1885, F.R.C.S.I. 1886, who died suddenly at Narandera on June 13th. The deceased gentleman was well known in Castlemaine (Vic.), where he resided for seven years, and at Mackay (Q.), where he also practised for some time.

CHARLES NORTON HARPER-CREWE, L.S.A. Lond. 1876, M.R.C.P. Edin. 1882, died at his residence at Marrickville on June 14th, at the age of 51 years. The deceased gentleman was a native of Sydney, and for some years carried on the business of a Custom House agent, and, after taking his degrees, he returned to Sydney, and practised in Sydney and suburbs ever since.

WE much regret to have to record the death of Peter Slade Kendall, L.R.C.P. et B.C.S. Edin. 1879, who died at his residence at Petersham, near Sydney, on June 11th, from inflammation of the lungs, at the early age of 41. The deceased gentleman arrived in the colony ten years ago, and during the whole of this time he practised at Petersham.

DR. W. ATTERBURY, formerly of Hillgrove, has succeeded to the practice of Dr. Cory at Catherine Hill Bay.

DR. G. C. CORY, late of Catherine Hill Bay, has been appointed surgeon to the hospital and clubs at Bingera.

DR. J. A. GOLDSMID has commenced practice at Cobarr.

REPORTED MORTALITY FOR THE MONTH OF MAY, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	111,244	221	106	10	...	...	2	2	2	6	11	11	7	2	3	...
Suburbs	275,615	861	302	133	...	2	11	3	5	22	36	42	27	11	1	8	
NEW ZEALAND.																	
Auckland & suburbs..	42,718	102	15	11	...	...	1	2	2	...	4	6	5	4	...	...
Christchurch ..	42,211	81	48	6	...	...	...	...	...	1	2	3	4	3	...	2
Dunedin ..	48,991	88	40	11	...	...	...	1	...	...	5	6	1	4	1	...
Wellington ..	36,710	94	37	10	...	...	1	...	3	...	1	...	1	3	...	1
QUEENSLAND.																	
Brisbane	56,075	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA.																	
Adelaide	345,888	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	39,749	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																	
Hobart	26,201	83	45	11	...	...	...	...	1	1	2	3	1	...	...	1
Launceston	23,075	47	29	7	...	...	...	...	...	1	2	2	3	1	2	...
Country Districts	99,927	248	71	...	...	...	...	...	1	1	1	...	...	...	...	...
VICTORIA.																	
Melbourne	64,171	96	58	136	...	4	8	11	13	8	73	43	56	39	...	1	
Suburbs	380,661	1005	479	
Ballarat and Suburbs	42,000
WESTERN AUSTRALIA*	82,072	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending.

METEOROLOGICAL OBSERVATIONS FOR MAY, 1895.

STATIONS	THERMOMETER.		Rain.	Wind.
	Maximum Sun.	Maximum Shade.		
Adelaide—Lat. 34° 55' 33" S.; Long. 138° 36' E.
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.	68°	...	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.	66°	...	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.	60°	...	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.	66°	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.	67°	...	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.	66°	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.	71°	...	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.	65°	...	...

LOUIS RALSTON HUXTABLE. M.B., C.M. EDIN.

Died 20th July, 1895.

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

NOTES ON PHTHISIS IN NEW SOUTH WALES AND OTHER AUSTRALASIAN COLONIES.

(Read before the Section of Sanitary Science and Hygiene of the Australasian Association for the Advancement of Science, Brisbane, January, 1895.)

By GEORGE LANE MULLINS, M.A., M.D., TRINITY COLLEGE, DUBLIN. PHYSICIAN TO THE HOSPICE FOR THE DYING; LATE ASSISTANT PHYSICIAN, ST. VINCENT'S HOSPITAL, SYDNEY.

INTRODUCTION.

PULMONARY phthisis, or consumption of the lungs, is a disease of all ages and of all climates. It is found in every country in the world, from the Polar regions in the north to the farthest point in the habitable lands of the southern hemisphere. In almost every civilised land it is so prevalent that it holds a prominent position among the causes of death.

In this paper I propose to show the distribution of the disease throughout Australasia, and, having done so, to endeavour to throw some light upon the causes which lead to a high or low mortality.

Hirsch, in his work on "Geographical and Historical Pathology," says that "the reputation that Australia used to enjoy for the rarity of consumption, and for the favourable influence of its climate upon the course of the malady, has of late been shown to be a mistaken one." Is this statement correct? I think not, and I will, in the course of this paper, give my reasons for this opinion. In order that I might arrive at the truth, I have obtained the vital statistics for the seven colonies of Australasia for the period comprised within the three years 1890-91-92. From these I have made my calculations, and on them I have based the conclusions which I have set forth in this paper. I may here acknowledge my indebtedness to Mr. T. A. Coghlan, Government Statistician, who has extended to me a helping hand in the compilation of the statistics of New South Wales; to the Government Statist of Victoria, the Registrars-General of the colonies of Queensland, South Australia, Western Australia, Tasmania, and New Zealand, for the kindness with which they forwarded to me the statistics and reports of their respective colonies.

It should be remembered that I am dealing with a three-year period, extending from January 1, 1890, to December 31, 1892; and that the figures quoted (unless otherwise stated) are for that period; also that by the term Australasia I mean the seven colonies—Queensland, New South Wales, Victoria, South Australia, Western Australia, Tasmania, and New Zealand.

1. GENERAL STATISTICS.

The estimated mean population of Australasia for the period was 8,841,809. The total number of deaths from all causes was 153,069, or a yearly average of 51,028. The number of deaths from phthisis was 12,248, or an average of 4,081 annually. Therefore, slightly under 8 per cent. (7.99 per cent.) of the deaths from all causes were due to phthisis.

The following table shows the number of deaths from phthisis per 100 deaths from all causes in various countries:—

TABLE A.

Russia	19.6	Holland	9.5
Belgium	18.2	Italy	9.0
Canada	16.2	Queensland	8.9
United States	14.2	Victoria	8.9
Germany	12.7	New Zealand	8.1
France	11.2	Australasia	7.9
Switzerland	11.1	South Australia	7.6
England	11.0	New South Wales	6.9
Greece	10.7	Tasmania	6.2
Scandinavia	10.2	Western Australia	5.9

NOTE.—The figures given in this table (except those for the Australasian colonies) are taken from "Mulhall's Dictionary of Statistics," and are, therefore, those for series of years prior to 1890.

If, however, we take a more accurate method of estimating the death-rate, and calculate the number of deaths from phthisis in every 1,000 inhabitants living, we find the proportion to be 1.06.

It might be well here to compare this death-rate with that of some of the countries of the world:—

TABLE B.

Death Rate from Phthisis per 1,000 Inhabitants.

Country.	Period.	Rate.
Belgium	1856-59	4.10
Scotland	1886	4.07
Sweden	1861-76	3.50
Norway	1871-75	2.53
Holland	1869-74	2.46
England	1872-76	2.20
Switzerland	1865-69	1.86
Australasia	1890-92	1.06

Australasia, therefore, has by far the lowest death-rate from phthisis.

Let us now take the statistics for each colony.

TABLE C.

Deaths from phthisis per 100 deaths from all causes.

Colony.	Mean population.	Deaths per 1000 inhabitants.
Melbourne...	8,788	907
Hobart ...	758	52
Sydney ...	5,841	533
Adelaide ...	1,229	128
Brisbane ...	988	101,564

TABLE F.

City.	Total Deaths*	Phthisis*	Mean Population	Phthisis per 100, all causes.	Phthisis per 1,000 inhabitants.
Melbourne..	8,788	907	490,902	10.29	1.84
Hobart ...	758	52	83,450	6.86	1.55
Sydney ...	5,841	533	383,386	9.13	1.39
Adelaide ...	1,229	128	133,252	10.41	0.96
Brisbane ...	988	101,564	101,564	9.71	0.94

*Average annual number.

The proportion of deaths from phthisis in each city compared with that of the whole colony is as follows:—

Melbourne ...	...	57.95
Sydney ...	...	51.59
Adelaide ...	...	41.29
Hobart ...	...	39.09
Brisbane ...	...	20.04

The next table shows the mean population of each colony for the period, and the death rate from phthisis per thousand inhabitants living.

TABLE D.

Colony.	Mean population.	Deaths per 1000 inhabitants.
Victoria ...	1,142,713	1.36
Queensland ...	411,767	1.16
South Australia ...	317,781	0.97
Western Australia...	47,791	0.96
Tasmania ...	148,528	0.90
New South Wales...	1,142,298	0.90
New Zealand...	630,936	0.81
Australasia ...	3,841,809	1.00

For comparison we may examine the mean annual rates for six of the Australasian colonies for the five-year period, 1885-1889.

TABLE E.

Colony.	1885-89.	1890-92.
Victoria ...	1.46	1.36
Queensland...	1.43	1.16
South Australia ...	1.08	0.97
New South Wales...	1.03	0.90
Tasmania ...	0.97	0.90
New Zealand ...	0.85	0.81

It is evident, therefore, that phthisis is decreasing in every colony.

Let us now turn to the death-rate of each of the principal cities.

The following table shows the death-rate from phthisis per hundred deaths from all causes and per thousand inhabitants living.

(In each case the suburbs are included.)

The following table shows the death-rate from phthisis in some of the principal cities in the world per 1,000 inhabitants:—

TABLE G.

City.	Period.	Rate.
Paris ...	1872-77	4.2
Stockholm ...	1881-76	4.1
Venice ...	1862-85	4.04
Berlin ...	1869-73	3.8
Frankfort...	1863-88	3.8
Bonn ...	1867-82	3.5
Hamburg ...	1871-83	3.4
Copenhagen ...	1874-83	3.0

The Australasian capitals have, therefore, a very much lower death-rate than European cities.

II. DISTRIBUTION IN NEW SOUTH WALES.

Let us now consider the distribution of phthisis in each colony separately.

NEW SOUTH WALES.

New South Wales had a mean population for the period of 1,142,298. The number of deaths from all causes was 26,394 males and 18,530 females, or a total of 44,924 persons; a yearly average of 8,798 males and 6,177 females, or 14,975 persons. Of this number 1,924 males and 1,176 females, or 3,100 persons, died of phthisis, being an average of 641 males and 392 females, or 1,033 persons annually.

There were, therefore, 6.90 deaths from phthisis per hundred deaths from all causes, and 0.90 per thousand inhabitants living. If, however, we take the census population of the middle year (1891) of the period as the mean population, we find that in New South Wales the death-rate from phthisis is 0.91 per thousand inhabitants.

The following table shows the death-rate for the colony, distinguishing the city of Sydney and

its suburbs, the metropolis, the country districts, and the colony as a whole :—

TABLE H.

—	Average annual No. deaths from all causes.	Average annual No. deaths from phthisis.	Deaths from phthisis p.c. of total deaths.	Deaths from phthisis per 1000 inhabitants.
City ...	1,957	211	10.78	1.96
Suburbs ...	3,833	323	8.29	1.16
Metropolis ...	5,841	533	9.12	1.44
Country ...	9,130	500	5.48	0.66
N. S. Wales	14,971	1,033	6.90	0.91

(The census populations of 1891 are taken as mean populations for the period).

In examining the distribution of the disease in the country districts it will be most convenient to group the registration districts under the various electorates as they existed during the period (1890-92).

First of all let us take the coastal electorates, and describe them from north to south.

*I. The Richmond (Casino, Murwillumbah, Lismore, Ballina, Tweed River), 22,821. Deaths, 11 M., 10 F.—21. Rate, 1 in 3,188 inhabitants.

II. The Clarence and Grafton (Maclean, Ullmarra, Grafton), 18,078. Deaths, 16 M., 8 F.—24. Rate, 1 in 2,259.

III. The Macleay (Kempsey, Boat Harbour, Macksville), 11,580. Deaths, 8 M., 3 F.—11. Rate, 1 in 3,826.

IV. Hastings and Manning (Taree, Port Macquarie), 18,428. Deaths, 3 M., 4 F.—7. Rate, 1 in 5,755.

V. Gloucester and Durham (Clarence Town, Dungog, Patterson, Stroud, Raymond Terrace, Copeland), 14,000. Deaths, 10 M., 9 F.—19. Rate, 1 in 2,068.

VI. Hunter, Newcastle, E. and W. Maitland, Northumberland and Morpeth (Greta, E. Maitland, W. Maitland, Newcastle, Hamilton, Stockton, Lambton, Minmi, Wallsend, Waratah, Adamstown, Merewether, West Wallsend, Morpeth), 81,242. Deaths, 87 M., 77 F.—164. Rate, 1 in 1,504.

VII. Wollombi and Hawkesbury (Windsor, Riverstone, Richmond, Wiseman's Ferry, Millfield, Wollombi, St. Albans), 18,080. Deaths, 12 M., 20 F.—32. Rate, 1 in 1,695.

VIII.—Illawarra (Wollongong, Woonona, Helensburgh), 12,735. Deaths, 9 M., 2 F.—11. Rate, 1 in 3,473.

IX. Kiama (Kiama), 8,082. Deaths, 0 M., 4 F.—4. Rate, 1 in 6,061.

X. Shoalhaven (Nowra, Milton, Berry), 10,500. Deaths, 7 M., 0 F.—7. Rate, 1 in 4,500.

*The first of the names is that of the electorate; those in brackets of the registration districts. These are followed by the population of the electorates. (Census, 1891).

XI. Eden (Eden, Bega, Lyttleton, Moruya, Candelero), 16,380. Deaths, 11 M., 7 F.—18. Rate, 1 in 2,730.

SUMMARY.—DEATH-RATE FROM PHTHISIS IN COASTAL DISTRICTS.

1. Kiama ...	... 1 in 6,061 inhabitants.
2. Hastings and Manning ...	... 1 " 5,755 "
3. Shoalhaven ...	... 1 " 4,500 "
4. Illawarra ...	... 1 " 3,473 "
5. Macleay ...	... 1 " 3,326 "
6. The Richmond ...	... 1 " 3,188 "
7. Eden ...	... 1 " 2,730 "
8. Clarence and Grafton ...	... 1 " 2,259 "
9. Gloucester and Durham ...	... 1 " 2,068 "
10. Wollombi and Hawkesbury ...	... 1 " 1,695 "
11. Newcastle and District ...	... 1 " 1,504 "

We may now turn to the figures for the inland divisions.

XII. Tenterfield (Tenterfield, Drake), 6,978. Deaths, 3 M., 2 F.—5. Rate, 1 in 4,187.

XIII. Inverell (Inverell), 8,647. Deaths, 7 M., 2 F.—9. Rate, 1 in 2,882.

XIV. Glen Innes (Glen Innes, Emmaville), 9,000. Deaths, 6 M., 3 F.—9. Rate, 1 in 3,000.

XV. New England (Armidale, Walcha, Hillgrove, Uralla, Bundarra), 19,700. Deaths, 17 M., 9 F.—26. Rate, 1 in 2,273.

XVI. Tamworth (Tamworth, Nundle, Manilla, Barraba), 14,500. Deaths, 12 M., 3 F.—15. Rate, 1 in 2,900.

XVI. Gunnedah (Gunnedah, Quirindi, Bogabri), 7,000. Deaths, 7 M., 8 F.—15. Rate, 1 in 1,400.

XVIII. Upper Hunter (Scone, Muswellbrook, Cassilis, Murrumbidgee, Merriwa), 13,000. Deaths, 11 M., 4 F.—15. Rate, 1 in 2,600.

XIX. Patrick's Plains (Singleton), 8,224. Deaths, 2 M., 7 F.—9. Rate, 1 in 2,741.

XX. The Nepean (Penrith, Springwood, St. Mary's), 10,100. Deaths, 13 M., 9 F.—22. Rate, 1 in 1,877.

XXI. Camden (Camden, Campbelltown, Picton, Joadja Creek, Berrima, Bowral, Robertson, Moss Vale), 22,708. Deaths, 80 M., 82 F.—112. Rate, 1 in 608.*

XXII. Goulburn and Argyle (Goulburn, Crookwell, Taralga), 21,000. Deaths, 29 M., 14 F.—43. Rate, 1 in 1,465.

XXIII. Braidwood (Braidwood), 6,800. Deaths, 5 M., 5 F.—10. Rate, 1 in 1,890.

XXIV. Queanbeyan (Queanbeyan, Bungendore, Captain's Flat), 6,500. Deaths, 4 M., 3 F.—7. Rate, 1 in 2,785.

XXV. Monaro (Cooma, Bombala, Nimitybelle, Kiandra, Adaminaby), 12,400. Deaths, 4 M., 9 F.—13. Rate, 1 in 2,861.

* It must be remembered that in this electorate there is a home for consumptives at Picton, at which a large number of deaths from phthisis occur every year. The deaths in the electorate were registered as follows:—Camden 7, Campbelltown 12, Picton 67 Berrima 4, Bowral 20, Robertson 1, Moss Vale 1; total 112.

XXVI. Mudgee (Mudgee, Gulgong, Tambaroora, Hill End, Rylstone), 15,800. Deaths, 10 M., 7 F.—17. Rate, 1 in 2,788.

XXVII. Wellington (Wellington), 6,150. Deaths, 7 M., 5 F.—12. Rate, 1 in 1,537.

XXVIII. Orange (Orange), 11,900. Deaths, 20 M., 8 F.—28. Rate, 1 in 1,275.

XXIX. Bathurst, E. & W. Macquarie (Bathurst, Sunny Corner, Sofala, Wattle Flat), 28,182. Deaths, 29 M., 23 F.—52. Rate, 1 in 1,834.

XXX. Molong (Molong, Cargo, Canowindra), 8,000. Deaths, 4 M., 2 F.—6. Rate, 1 in 4,000.

XXXI. Carcoar (Carcoar, Tuena, Cowra, Blayney, Mount MacDonald), 13,873. Deaths, 5 M., 3 F.—8. Rate, 1 in 5,202.

XXXII. Hartley (Lithgow, Katoomba, Oberon), 12,869. Deaths, 3 M., 4 F.—7. Rate, 1 in 5,801.

XXXIII. Yass Plains (Yass, Gunning), 9,000. Deaths, 6 M., 6 F.—12. Rate, 1 in 2,250.

XXXIV. Burrows (Burrows), 4,600. Deaths, 1 M., 2 F.—3. Rate, 1 in 4,600.

XXXV. Gundagai (Gundagai, Cootamundra), 8,300. Deaths, 7 M., 4 F.—11. Rate, 1 in 2,263.

XXXVI. Young (Young, Murrumburrah), 13,000. Deaths, 12 M., 5 F.—17. Rate, 1 in 2,294.

XXXVII. Tumut (Tumut, Batlow, Adelong), 7,000. Deaths, 7 M., 1 F.—8. Rate, 1 in 2,625.

XXXVIII. The Gwydir (Wyallda, Moree, Bingara), 8,800. Deaths, 1 M., 3 F.—4. Rate, 1 in 6,225.

XXXIX. The Bogan and Namoi (Peak Hill, Dubbo, Nyngan, Coonamble, Coonabarabran, Warren, Narrabri, Walgett), 30,665. Deaths, 26 M., 21 F.—47. Rate, 1 in 1,957.

XL. Forbes (Forbes, Parkes, Condobolin), 13,181. Deaths, 9 M., 4 F.—13. Rate, 1 in 3,080.

XLI. Grenfell (Grenfell, Barmedman, Temora, Marsden), 7,218. Deaths, 11 M., 6 F.—17. Rate, 1 in 1,273.

XLII. The Murrumbidgee (Wagga, Narrandera, Urana, Hillston, Junee), 25,600. Deaths, 37 M., 20 F.—57. Rate, 1 in 1,315.

XLIII. The Hume and Albury (Albury, Tumberumba, Corowra, Germanton), 17,718. Deaths, 26 M., 15 F.—41. Rate, 1 in 1,296.

XLIV. The Murray (Moulamein, Moama, Jerilderie, Deniliquin, Tocumwal), 8,228. Deaths, 14 M., 9 F.—23. Rate, 1 in 1,078.

XLV. Bourke (Bourke, Brewarrina, Barrington, Cobar, Collarenebri), 13,800. Deaths, 26 M., 5 F.—31. Rate, 1 in 1,658.

XLVI. Balranald (Hay, Mossgiel, Balranald, Hillston, Nymagee, Mount Hope), 11,514. Deaths, 26 M., 11 F.—37. Rate, 1 in 938.

XLVII. Wilcannia (Wilcannia), 2,704. Deaths, 6 M., 1 F.—7. Rate, 1 in 1,159.

XLVIII. Sturt (Broken Hill, Milparinka, Silverton, Tibooburra), 26,588. Deaths, 28 M., 19 F.—42. Rate, 1 in 1,898.

XLIX. Wentworth (Wentworth, Menindie), 3,410. Deaths, 2 M., 1 F.—3. Rate, 1 in 3,410.

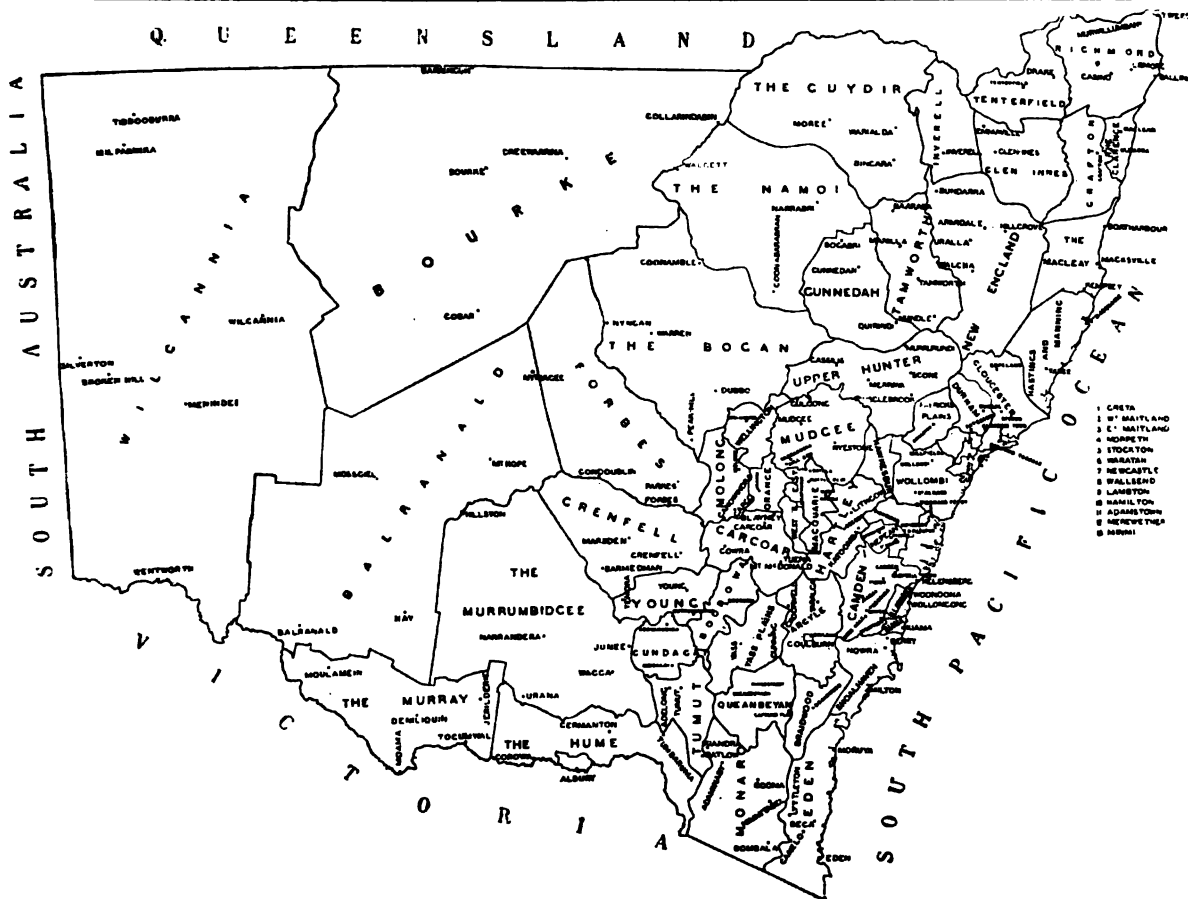
SUMMARY TABLE.

Electorates with Death-rate from Phthisis.

Gwydir	...	...	1 in 6,225 inhabitants.
*Kiamia	...	...	6,061
*Hastings and Manning	...	...	5,755
Hartley	...	...	5,301
Carcoar	...	...	5,202
Burrows	...	...	4,600
*Shoalhaven	...	...	4,500
Tenterfield	...	...	4,187
Molong	...	...	4,000
*Illawarra	...	...	3,473
Wentworth	...	...	3,410
*Macleay	...	...	3,328
*The Richmond	...	...	3,188
Forbes	...	...	3,030
Glen Innes	...	...	3,000
Tamworth	...	...	1,900
Inverell	...	...	2,882
Monaro	...	...	2,861
Mudgee	...	...	2,788
Queanbeyan	...	...	2,735
Patrick's Plains	...	...	2,741
*Eden	...	...	2,730
Tumut	...	...	2,625
Upper Hunter	...	...	2,600
Young	...	...	2,294
New England	...	...	2,273
Gundagai	...	...	2,263
*Clarence and Grafton	...	...	2,259
Yass Plains	...	...	2,250
*Gloucester and Durham	...	...	2,068
The Namoi and Bogan	...	...	1,957
Sturt	...	...	1,898
Braidwood	...	...	1,890
*Wollombi and the Hawkesbury	...	...	1,695
Bourke	...	...	1,658
Wellington	...	...	1,537
*Newcastle and district	...	...	1,504
Argyle and Goulburn	...	...	1,465
Gunnedah	...	...	1,400
Nepean	...	...	1,377
Bathurst, and E. and W. Macquarie	...	...	1,334
The Murrumbidgee	...	...	1,315
Albury and The Hume	...	...	1,296
Orange	...	...	1,275
Grenfell	...	1 in	1,273
Wilcannia	...	...	1,159
The Murray	...	...	1,078
Balranald	...	...	938
Camden	...	...	608
†Central Cumberland & P'matta	...	...	360

* Coastal electorates.

† Central Cumberland and Parramatta contain various Government asylums, &c., in which most of the deaths in the electorates have occurred.



Map showing country electorates as they existed during 1890-91-92.

ERATA.—For "Gwydir" read "Gwydir," "Collarendabin" read "Collarendabri," "Helensberg" read "Helensburgh," "Canelo" read "Candelo."

The electorate of Wilcannia should be subdivided into three, viz.—North-eastern portion, Wilcannia; north-western, Sturt; and southern, Wentworth.

Table J shows the registration districts in which no deaths occurred from phthisis during the period, and also the number of deaths from all causes in each district during the same period.

TABLE J.

District.	Electorate.	Deaths—All causes.
Tuena ...	Carcoar ...	109
Emmaville ...	Glen Innes ...	76
Oberon ...	Hartley ...	64
Barraba ...	Tamworth ...	55
Eden ...	Eden... ...	51
Adaminaby ...	Monaro ...	45
Taralga ...	Argyle ...	44
Canowindra ...	Molong ...	43
Nundle ...	Tamworth ...	32
Mount Hope ...	Barranald ...	29
Joadja Creek ...	Camden ...	27
Manilla ...	Tamworth ...	25
Captain's Flat ...	Queanbeyan...	24
Barrington ...	Bourke ...	15
Barmedman ...	Grenfell ...	14
Marsden ...	" ...	14

TABLE J.—Continued.

District.	Electorate.	Deaths—All causes.
Mount Macdonald	Carcoar ...	11
Lyttleton ...	Eden... ...	10
Millfield ...	Wollombi ...	10
Kiandra ...	Monaro ...	5

If we now divide the Colony into larger groups, according to locality, we obtain the following information :—

I. Western Group.--Electorates of Bourke, Sturt, Wilcannia, Balranald and Wentworth: Estimated mean population, 52,000; deaths from phthisis, 95; rate, 1 in 1,644.

II. The Murray Group.—Electorates of the Murray, the Hume, and Albury: Population, 25,000; deaths from phthisis, 64; rate, 1 in 1,174.

III. The Murrumbidgee Group.—Electoralates of the Murrumbidgee, and part of Balranald: Population, 35,000: deaths from phthisis, 72: rate, 1 in 1,458.

IV. Young Group.—Electorates of Grenfell and Young: Population, 33,650; deaths from phthisis, 49; rate, 1 in 2,059.

V. The Bogan Group.—Electorates of the Bogan and Forbes: Population, 36,850; deaths from phthisis, 49; rate, 1 in 2,256.

VI. The Namoi and Gwydir Group.—Electorates of the Gwydir, the Namoi, and Gunnedah: Population, 25,850; deaths from phthisis, 80; rate, 1 in 2,585.

VII. New England Group.—Electorates of Tenterfield, Inverell, Glen Innes, New England, and Tamworth: Population, 60,150; deaths from phthisis, 64; rate, 1 in 2,821.

VIII. North Coast Group.—Electorates of the Richmond, Clarence, Grafton, the Macleay, the Hastings and Manning: Population, 67,600; deaths from phthisis, 63; rate, 1 in 3,219.

IX. The Hunter Group.—Electorates of the Upper Hunter, Gloucester, Durham, Patrick's Plains, the Hunter, Newcastle, East Maitland, West Maitland, and Morpeth: Population, 120,900; deaths from phthisis, 207; rate, 1 in 1,752.

X. Bathurst Group.—Electorates of Bathurst, East and West Macquarie, Orange, Molong, and Carcoar: Population, 57,850; deaths from phthisis, 91; rate, 1 in 1,906.

XI. The Hawkesbury and Nepean Group.—Electorates of Wollombi, Hawkesbury, Hartley, The Nepean, and Camden: Population, 62,600; deaths from phthisis, 180; rate, 1 in 1,043.

XII. Mudgee Group.—Electorates of Mudgee and Wellington: Population, 22,350; deaths from phthisis, 29; rate, 1 in 2,310.

XIII. Goulburn Group.—Electorates of Goulburn and Argyle: Population, 22,000; deaths from phthisis, 43; rate, 1 in 1,537.

XIV. Gundagai Group.—Electorates of Gundagai and Tumut: Population, 15,600; deaths from phthisis, 19; rate, 1 in 2,460.

XV. Monaro Group.—Electorates of Monaro, Queanbeyan, and Braidwood: Population, 25,700; deaths from phthisis, 30; rate, 1 in 2,750.

XVI. South Coast Group.—Electorates of Kiama, Illawarra, Shoalhaven, and Eden: Population, 48,800; deaths from phthisis, 41; rate, 1 in 3,571.

SUMMARY TABLE.—GROUPS.

South Coast ...	1 in 3,571 inhabitants.
North Coast ...	3,219 "
New England...	2,821 "
Namoi and Gwydir ...	2,585 "
Monaro ...	2,570 "
Gundagai ...	2,460 "
Mudgee ...	2,310 "
The Bogan ...	2,256 "
Young ...	2,059 "
Bathurst ...	1,906 "
The Hunter ...	1,752 "
Western ...	1,644 "
Goulburn ...	1,537 "
The Murrumbidgee ...	1,458 "
The Murray ...	1,174 "
Hawkesbury and Nepean ...	1,043 "

III. QUEENSLAND.

Queensland had an estimated mean population (for the period) of 411,767 persons. The number of deaths from all causes was 10,265 males, and 5,809 females, or 16,074 persons; a yearly average of 3,422 males and 1,986 females, or 5,358 persons. During the period the deaths from phthisis were as follows, viz.:—1,074 males and 865 females, or 1,439—being an average of 358 males and 122 females, or 480 persons annually. There were, therefore, 8.95 deaths from

phthisis per hundred deaths from all causes, and 1.16 per thousand inhabitants living.

Table K shows the various registration districts throughout the colony, together with the populations according to the census of 1891, the number of deaths from phthisis (M. and F.) and the death-rate for each district for the period.

TABLE K.

No.	Name.	Deaths, Phthisis.			Population	Rate—1 in
		M.	F.	Total		
1	Somerset...	7	0	7	1,470	630
2	Palmer ...	0	1	1	838	2,514
3	Cook ...	14	4	18	5,080	847
4	Woothakata ...	1	0	1	1,399	4,197
5	Etheridge ...	2	0	2	1,761	2,641
6	Bourke ...	1	1	2	4,962	7,443
7	Cloncurry ...	0	0	0	1,211	—
8	Hughenden ...	2	1	3	2,468	2,463
9	Cairns ...	65	12	77	7,024	273
10	Herberton ...	3	0	3	3,477	3,477
11	Cardwell...	53	5	58	3,435	180
12	Kennedy ...	44	16	60	18,825	941
13	Townsville ...	63	15	78	13,016	500
14	Bowen ...	3	1	4	2,788	2,091
15	Mackay ...	107	17	124	10,538	255
16	St. Laurence ...	0	0	0	967	—
17	Peak Downs ...	0	0	0	313	—
18	Clermont ...	3	1	4	5,288	3,966
19	Westwood ...	19	8	27	7,746	860
20	Rockhampton ...	34	15	49	11,629	712
21	Gladstone ...	1	3	4	3,306	2,479
22	Leichhardt ...	8	2	10	4,268	1,280
23	Springsure ...	2	2	4	1,887	1,415
24	Tambo ...	2	0	2	886	1,326
25	Blackall ...	2	2	4	4,529	3,397
26	Aramac ...	3	0	3	2,765	2,765
27	Diamantina ...	0	0	0	1,160	—
28	Marathon ...	2	1	3	1,991	1,991
29	Bundaberg ...	123	13	136	18,712	302
30	Wide Bay ...	8	2	10	4,647	1,394
31	Maryborough ...	39	11	50	12,178	730
32	Tiaro ...	3	1	4	2,676	2,007
33	Gympie ...	19	20	39	13,607	1,046
34	Burnett ...	3	1	4	4,465	3,349
35	Taroom ...	0	1	1	812	2,436
36	Maranoa ...	5	3	8	4,255	4,595
37	Charleville ...	8	2	10	3,211	963
38	Warrego ...	0	0	0	2,229	—
39	Cunnamulla ...	1	0	1	2,114	6,342
40	Balonne ...	3	0	3	3,021	3,021
41	Darling Downs N.	1	0	1	4,636	13,908
42	Dalby ...	0	1	1	1,378	4,134
43	Darling Downs W.	0	0	0	1,273	—
44	Darling Downs C.	4	2	6	7,561	3,780
45	Darling Downs E.	3	2	5	6,430	3,858
46	Warwick ...	9	5	14	3,402	729
47	Stanthorpe ...	3	0	3	1,869	1,869
48	Highfields ...	0	0	0	3,067	—
49	Drayton and Toowoomba	18	13	31	10,759	1,041
50	Stanley ...	0	1	1	2,125	6,375
51	Caboolture ...	10	8	18	18,591	3,098
52	Moreton E.	71	9	80	9,375	351
53	Brisbane...	187	102	289	56,075	592
54	Toowong...	15	8	23	7,413	966
55	Enoggera ...	20	18	38	17,473	1,379
56	Oxley ...	26	18	44	7,799	531
57	Ipswich ...	24	8	32	10,190	955
58	Moreton W.	8	6	14	17,062	3,656
59	Fassifern ...	1	0	1	6,817	20,451
60	Logan ...	21	3	24	8,474	1,059

IV. TASMANIA.

The estimated mean population of the island of Tasmania for 1890-92 was 148,523.

During the period there were 6,421 deaths from all causes. Of these, 3,713 were males and 2,708 females. The average annual number of deaths was therefore 2,140.

Of these, 401 (223 males and 178 females) were caused by phthisis—183 yearly.

There were, therefore, 6·21 deaths from phthisis per hundred deaths from all causes, while the death-rate from phthisis per thousand inhabitants equalled that of New South Wales, viz., 0·90.

Table L. gives the Registration Districts in groups, together with the population (Census 1891), the number of deaths from phthisis, and the death-rate for the colony of Tasmania.

TABLE L.

District.	Population	Deaths. Phthisis.	Rate—1 in
Chief Urban Districts—			
Hobart	33,450	161	623
Launceston	21,316	79	809
North-eastern Division—			
Beaconsfield	2,097	11	572
Fingal	3,404	2	5,106
Frankford	853	3	858
George Town	586	1	1,758
Lefroy	924	1	2,772
Evandale	3,262	3	3,262
Portland	1,699	2	2,398
Ringarooma	4,783	7	2,050
Westbury	3,681	8	1,380
Total	21,194	38	1,290
North-western Division—			
Deloraine	4,913	9	1,638
Emu Bay	4,001	10	1,200
Stanley	1,625	4	1,219
Mersey	4,069	2	6,103
Port Sorell	456	3	456
Port Frederick	2,312	1	6,936
Sheffield	2,217	2	3,325
Ulverstone	5,734	8	2,150
Waratah	1,888	4	1,416
Montagu	300	3	300
Total	27,515	46	1,794
Midland Division—			
Bothwell	1,378	2	2,067
Campbelltown	2,695	11	735
Green Ponds	1,303	1	3,909
Hamilton	1,802	2	2,703
Longford	5,429	9	1,809
Oatlands	3,330	3	3,330
Total	15,937	28	1,707
South-eastern Division—			
Brighton	2,111	6	1,055
Clarence	1,063	1	3,189
Glamorgan	1,001	0	—
Gordon	940	1	2,820
Kingston	1,161	4	870
New Norfolk	4,253	9	1,418
Port Cygnet	1,561	2	2,341
Ralph's Bay	285	1	855
Richmond	2,561	5	1,536
Sorell	2,087	6	1,043

TABLE L.—Continued.

District.	Population	Deaths. Phthisis.	Rate—1 in
South-eastern Division—			
Spring Bay	918	0	—
Tasman's Peninsula	748	4	561
Victoria	985	1	2,955
Total	19,674	48	1,229
South-western Division—			
Southport	772	0	—
Esperance	658	2	987
Franklin	1,274	3	1,274
Geeveston	1,000	2	1,500
Strahan	3,877	2	5,815
Total	7,581	9	2,527

V. VICTORIA.

It is to be regretted that it is impossible to give the distribution of the disease throughout the colony of Victoria. I am, however, able to give the following figures:—

The estimated mean population of the colony was 1,142,713. There were 52,494 deaths from all causes, viz., 30,188 males and 22,361 females, or a yearly average of 17,498 persons. Of these 4,695 (2,822 males and 1,873 females) died of phthisis, being an average of 1,565 persons every year.

The deaths from phthisis amounted to 8·94 per cent. of the deaths from all causes, and 1·86 per thousand of the population. It may here be stated that Victoria shows the highest death-rate per thousand inhabitants of all the Australian colonies.

VI. SOUTH AUSTRALIA.

In the colony of South Australia phthisis holds the foremost place in the death returns for 1890-91-92, no less than 930 deaths from that cause being registered.

Strangely enough, old age holds second place in the records, 890 deaths being returned.

The estimated mean population of the province was 317,781. The total number of deaths was 11,845, or 3,948 annually. Of these, 930 (500 males and 430 females)—or 310 annually—succumbed to phthisis. The death-rate for the disease was 7·86 per cent. of deaths from all causes, and 0·97 per thousand inhabitants.

In the Northern Territory accurate statistics are available for the years 1891 and 1892 only. The estimated mean population for the two-year period was 5,089. The total number of deaths was 59, and there were eight deaths from phthisis (seven males and one female).

VII. WESTERN AUSTRALIA.

Very little can be said concerning the distribution of the complaint in the large western colony. Although containing an area of over a million square miles, the estimated mean population (1890-92) is only 47,791.

The total number of deaths from all causes was 2,340, or 780 annually. Of these 139 (46 per annum) were due to phthisis. The deaths from this disease amounted to 5.94 per cent. of all deaths, and 0.96 per thousand inhabitants.

It is impossible to record accurately the distribution of the disease in such a large tract of land, containing as it does so small a population.

VIII. NEW ZEALAND.

The estimated mean population of the colony of New Zealand for the period was 630,936. During the same period the deaths from all causes totalled 18,971, or 6,323 annually. Of these, 1,589, viz., 829 males and 710 females, were caused by phthisis; being an annual average of 513 persons. There were therefore 8.11 deaths from phthisis per hundred deaths from all causes, or 0.81 per thousand inhabitants.

New Zealand has the lowest death-rate per thousand inhabitants of any of the Australasian colonies.

Table M. contains the provinces of the North and South Islands, with the populations, number of deaths from phthisis, and the rate according to population of the province.

TABLE M.

—	Province.	Est. mean Pop'n.	Deaths, Phthisis.			Rate, 1 in.
			M.	F.	Total	
North Island..	Auckland ..	136,824	232	142	374	1,097
	Taranaki ..	21,659	22	21	43	1,511
	Hawke's Bay ..	28,450	57	44	101	845
	Wellington ..	94,711	96	102	198	1,485
South Island	Marlborough ..	12,756	12	11	23	1,663
	Nelson ..	34,236	46	37	83	1,234
	Westland ..	16,230	30	11	41	1,187
	Canterbury ..	130,658	121	159	280	1,399
	Otago ..	156,725	211	183	394	1,193

The following table shows the number of deaths from phthisis for the four boroughs of Auckland, Wellington, Christchurch and Dunedin:—

Borough.	1890.	1891.	1892.	Total.
Auckland ..	38	40	32	110
Wellington ..	37	28	31	96
Christchurch ..	14	8	25	47
Dunedin...	35	36	31	102
—	124	112	119	355

IX. INFLUENCE OF AGE AND SEX.

Table N. shows the numbers of those who died of phthisis at each age group. The table shows that in 12,072 cases

2,080 were aged between 25 and 30 years.					
1,848	"	"	20	"	25
1,688	"	"	30	"	35
1,293	"	"	35	"	40
952	"	"	40	"	45
804	"	"	45	"	50

790 were aged between 15 and 20 years.

749	"	"	50	"	55
585	"	"	55	"	60
485	"	"	60	"	65
250	"	"	65	"	70
162	"	"	under 5	"	"
157	"	"	between 10	"	15
101	"	"	70	"	75
69	"	"	5	"	10
59	"	"	upwards of	"	75

(These figures are those of males and females in New South Wales, Queensland, Tasmania, Victoria, South Australia, and New Zealand. No statistics of age for Western Australia are available.)

In New South Wales phthisis is not frequent until the age 10-15 is passed. Then the mortality increases rapidly to the thirtieth year, after which it slowly declines as the age advances. No age-group is exempt for either male or female.

In Queensland, among males there is a decline from birth up to 15 years; then a sudden rise in the 15-20 period; a most alarming increase during the period 20-25; and a very gradual decline till the highest ages are reached. Among females there is a corresponding decline from birth to 15 years; then a rise till the highest point is reached at age 25-30; then a decline till the period 60-65 is passed, after which no deaths are recorded.

In Tasmania no deaths are recorded among males between 5-10 years, while from birth up to five years and from 10-15 years there are very few. Then the rate rises until it reaches a maximum at the period 25-30. The decline is then gradual to 50-55, the rate rises again at 55-60, then falls to 70, when a slight rise again occurs; and above 75 deaths from phthisis are rare. Among females, after five years there is a gradual increase until the period 30-35, when there is a sudden fall to 40-45; then a slight rise in the following period, and after that a fall until at the period 65-70 no deaths are recorded. From 70-75 deaths are rare; above 75 there are none.

In Victoria the highest mortality occurs between 25-30 years. The rate then declines until the highest ages are reached; no period being exempt for either sex.

In South Australia the rate during the first five years is slightly higher than during the following ten years. Then it increases until it reaches a maximum at 30-35, when it gradually declines.

In the Northern Territory, of the six persons who died in 1891, five were males and one a female. Of these, five died between 20-40 years of age, and one between 40-60. In 1892 there were two deaths, both males, aged between 40-60.

In New Zealand the maximum is reached at age 20-25, but the decline afterwards is very gradual. There is a slight rise at age 50-55 among males, and at ages 45-55 among females.

TABLE O.

Males.

	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75 Upwards
New South Wales ...	16	9	16	64	220	313	295	241	199	153	150	92	67	33	15	9
Queensland ...	7	4	1	86	220	205	179	103	74	61	55	29	27	12	5	1
Tasmania ...	4	0	5	19	35	45	31	26	15	10	8	10	4	4	6	2
Victoria ...	24	12	17	94	347	443	346	273	200	196	223	235	231	113	40	27
South Australia ...	7	4	2	25	73	75	81	61	44	40	31	22	18	13	2	2
New Zealand ...	8	3	15	54	132	111	90	94	64	63	71	61	34	21	5	3

Females.

	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75 Upwards
New South Wales ...	23	9	17	87	169	246	169	138	99	85	45	28	27	21	8	4
Queensland ...	11	4	2	27	57	79	55	44	29	23	16	10	6	—	—	—
Tasmania ...	6	2	3	13	35	35	36	16	6	10	5	4	4	—	2	—
Victoria ...	26	15	44	165	342	362	257	177	147	105	84	60	49	24	11	4
South Australia ...	10	2	9	35	66	63	72	50	40	20	23	18	8	6	4	4
New Zealand ...	20	5	26	111	152	103	77	90	35	38	38	16	10	3	3	3

Total.

	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75 Upwards
New South Wales ...	39	18	33	151	389	559	464	379	298	238	195	120	94	54	23	13
Queensland ...	18	8	3	113	277	284	234	147	103	84	71	39	33	12	5	1
Tasmania ...	10	2	8	32	70	80	67	42	21	20	13	14	8	4	8	2
Victoria ...	50	27	61	259	689	805	603	450	347	301	307	295	280	137	51	31
South Australia ...	17	6	11	60	139	138	153	111	84	60	54	40	26	19	6	6
New Zealand ...	28	8	41	175	284	214	167	164	99	101	109	77	44	24	8	6

TABLE P.
Highest Mortality Periods.

Colony.	Males.	Females.	Both Sexes.
New South Wales...	25-30	25-30	25-30
Queensland ...	20-25	25-30	25-30
Tasmania ...	25-30	30-35	25-30
Victoria ...	25-30	25-30	25-30
South Australia ...	30-35	30-35	30-35
New Zealand ...	20-25	20-25	20-25

The following table shows the census population of each colony in 1891, the average annual number of deaths from phthisis (for males and females), and also the rate.

TABLE Q.

Colony.	MALES.			FEMALES.		
	Population.*	Deaths, Phthisis.	Rate, 1 in	Population.*	Deaths, Phthisis.	Rate, 1 in
New South Wales	612,562	641	955	519,672	392	1,325
Queensland ..	223,779	358	625	169,939	122	1,392
Tasmania ...	77,560	74	1,048	69,107	59	1,171
Victoria ...	886,614	940	624	539,109	624	862
South Australia ..	187,759	166	938	182,667	143	1,067
New Zealand ...	355,738	275	1,293	312,913	236	1,325

*Census, 1891.

†Average annual number.

From Table Q. we find the colonies stand in the following order:—

MALES.

	MALES.	Male inhabitants.
N. Zealand...1 death (phthisis) in every	1,293	
Tasmania ...1	1,048	
N. S. Wales 1	955	
S. Australia 1	938	
Queensland 1	625	
Victoria ...1	624	

FEMALES.

	FEMALES.	Female inhabitants.
Queensland 1 death (phthisis) in every	1,393	
N. S. W. } 1	1,325	
N. Zeal'd } 1	1,325	
Tasmania ...1	1,171	
S. Australia 1	1,067	
Victoria ...1	862	

These figures are extremely interesting. New Zealand has a low rate for both sexes, as also have Tasmania and New South Wales. Victoria has a very high rate, while South Australia follows it closely. But the most interesting item is that of Queensland. As regards males it has the worst rate on the list, but for females it has the best. The reason of this will be given fully later on, but it might be mentioned here that the death rate (phthisis) of Queensland is swollen by the great mortality among the kanakas every year.

X. BIRTHPLACES, NATIONALITY, &c.

It is to be regretted that no statistics of birth-places or nationality are available for most of the colonies. Australia is, as all know well, a health

resort for many persons from Great Britain and other European countries. Many of the cases which come to our shores come only to breathe their last shortly after their arrival. Almost every vessel which arrives brings one or more consumptives in the last stage of the malady to swell the death-rate. This being so, I have endeavoured to ascertain the nationality, place of birth, and length of residence in the colony of each fatal case. With the exception of Queensland and New Zealand, I cannot find any records.

From a table compiled by the Registrar-General of New Zealand (published in the official work, "Statistics of New Zealand, 1892—Vital Statistics") it would appear that, of 524 persons who died from phthisis in 1892, only 209 (90 males and 119 females) were born in the colony. Now, at the time of the census in 1891, there were about 183,000 of each sex, or 366,000 natives of New Zealand, excluding Maoris. This would show one death from phthisis in every 1,750 of native-born population, or 572 per thousand native-born inhabitants. This table also shows that phthisis is relatively more frequent among females than males (native-born), and also that the highest mortality period occurs at an earlier age among the native-born population than among those born outside the colony.

With regard to the length of residence in Queensland, and the birth-places of persons who died of phthisis, I must refer to the reports of the Registrar-General for the various years.

In these tables Queensland is set down as the birth-place of 46 persons in 1890, 34 in 1891, and 36 in 1892, or a total of 116 in the three years—a yearly average of nearly 39. The native-born population at the census of 1891 amounted to 176,971, so that there was one death for every 4537 inhabitants who claimed Queensland as their birth-place.

In the three years there were 486 deaths among the Polynesians, 281 among the English, 241 among the Irish, and 127 among the Scotch, while other countries claimed smaller numbers. All the Australasian colonies (including Queensland and New Zealand) claimed 182 of the victims to phthisis.

During the three years 127 persons died from phthisis whose length of residence in Queensland did not exceed one year. Their nationalities were as follows:—Polynesia 72, England 16, Queensland 10, Scotland 8; New South Wales, South Australia, Victoria, Tasmania, and U.S. America 1 each; while all other countries claim five.

Considering these figures carefully and impartially, we are forced to two conclusions: First, that the Australian-born population is not subject

to pulmonary phthisis; and, second, that the natives of Polynesia succumb to phthisis to a remarkable degree. It seems also safe to say that the Queensland climate is the cause of incipient phthisis among the South Sea Islanders; for, of 29 persons who died after less than three months' residence in the colony, only four were Polynesians, showing that the disease must have been contracted (in the majority of cases, at any rate) within the boundaries of Queensland.

The tables published by the Registrar-General of Queensland are invaluable in the study of this disease, and it is much to be regretted that similar tables for the other Australasian colonies are not available.

XI. OCCUPATION.

Unfortunately the occupations, as given in the official returns of those who have died from phthisis, do not show the nature of the work done by the deceased. Vague terms, such as labourer, married woman, nurse, &c., are used without any qualification. It is obvious, therefore, that little use can be made of the information thus given. This is greatly to be regretted, as there can be little doubt that the occupation of a phthisical persons plays a very important part in the history of the disease.

XII. METEOROLOGICAL CONDITIONS.

It is interesting to study the connection between the death-rate from phthisis and the prevailing meteorological conditions.

NEW SOUTH WALES.

The following table shows the number of deaths from phthisis, the mean height of the barometer, mean temperature in the shade, and the rainfall for each month, for Sydney and suburbs:—

TABLE R.

Month.	Deaths, Phthisis	Mean shade temperature.	Mean height barometer.	RAINFALL.	
				Depth, in.	No. days.
1890					
January ...	47	71.6	30.033	6.02	15
February ...	32	71.2	29.959	15.98	20
March ...	36	69.5	30.088	17.13	25
April ...	56	63.7	30.168	2.46	15
May ...	58	59.0	30.201	8.45	19
June ...	54	57.2	29.985	10.78	19
July ...	56	51.3	30.064	9.01	17
August ...	52	54.1	30.049	1.24	6
September...	52	59.6	30.012	2.17	9
October ...	34	65.4	29.809	1.60	9
November ...	38	66.4	29.924	4.02	12
December ...	31	68.2	29.946	2.56	18
1891					
January ..	23	73.5	29.954	4.41	18
February ...	36	69.1	30.015	2.56	12
March ...	37	69.2	30.170	6.20	18
April ...	55	63.9	30.223	4.70	19
May ...	50	57.0	30.373	2.78	20
June ..	40	56.0	29.993	14.50	19

TABLE R—Continued.

Month.	Deaths, Phthisis	Mean shade temperature.	Mean height barometer.	RAINFALL.	
				Depth, in.	No. days.
July ...	45	52.3	30.123	3.81	18
August ...	45	54.9	30.172	3.53	17
September...	50	57.4	30.153	5.83	15
October ...	52	62.5	30.055	1.77	14
November ...	56	66.0	30.062	3.29	16
December ...	61	71.4	29.888	1.69	14
1892					
January ...	50	70.5	29.978	6.38	13
February ...	40	72.0	30.054	4.44	8
March ...	48	70.1	30.006	18.46	21
April ...	36	62.8	30.099	4.19	19
May ...	44	58.7	30.198	3.01	19
June ...	32	59.8	30.163	1.93	10
July ...	41	52.6	30.199	4.64	16
August ...	41	54.4	30.031	4.80	16
September...	44	57.8	30.077	6.77	16
October ...	48	62.6	30.035	4.86	19
November ...	43	66.4	29.990	2.88	16
December ...	36	68.3	29.896	6.74	16

corresponds to a high death-rate, and a low barometric reading to a low rate. Temperature and rainfall do not appear to influence the death-rate to any degree. It will be seen that the highest death-rate (9.5 p.c.) is found in May, while April and August come next with 9.0 p.c. each.

Table S. shows the number of deaths occurring in each month in the country districts of the colony.

TABLE S.
(Sydney and suburbs are not included.)

January ...	129	May ...	110	September ...	117
February ...	101	June ...	135	October ...	133
March ...	125	July ...	139	November ...	148
April ...	118	August ...	135	December ...	110

Ratio per cent. for four periods of year.

	Jan.-March.	April-June.	July-Sept.	Oct.-Dec.	
Metropolis ...	21.9	26.5	26.6	25.0	100.0
Country ...	23.3	26.5	25.7	27.1	100.0

In Sydney and suburbs the highest death-rate occurs in the third quarter, but there is little difference between it and the second. In the country districts the fourth quarter has the highest percentage of deaths.

QUEENSLAND.

I need not go into the details of the relation between the death-rate from phthisis and the atmospheric conditions in Queensland, Dr. David Hardie having recently dealt with the subject fully. Dr. Hardie's conclusions are as follows:—

1. That low barometric pressure is generally associated with a low death-rate from phthisis.

2. That a comparatively low temperature in summer and autumn, and a high temperature in winter are favourable to a low mortality, provided, in all cases, the mean and absolute range be low, and the rainfall and number of wet days be high. A low temperature during the winter months is, however, favourable to a low death-rate, if accompanied by a low range, high rainfall, and number of rainy days; and, conversely, a high temperature in winter is not attended by a low mortality unless the range be also low, and the rainfall and number of wet days be high.

3. That the influence of relative humidity is somewhat doubtful, although, upon the whole, a high humidity is connected with a low mortality.

4. That the more uniform for the year the mean daily and absolute range of temperature, and amount of cloud, and the greater the humidity, rainfall, and number of rainy days, the lower will be the mortality.

MEAN HEIGHTS OF
BAROMETER (INCHES).PERCENTAGE OF
DEATHS, PHTHISIS.MEAN SHADE
TEMPERATURE.

Chart showing mean height of Barometer, percentage of deaths from Phthisis, and mean temperature, Sydney and Suburbs, for each month, 1890-91-92.

On examining the above chart a distinct parallelism may be observed between the curves representing the barometric readings and the death-rate. A high reading of the barometer

5. That a year of heavy rainfall does not necessarily coincide with one of low death-rate, nor *vice versa*. The latter depends rather on the regularity or otherwise with which the rain falls from one season to another; the more uniform the fall the less extreme will be the death-rate.

6. That a heavy rainfall in summer is favourable to a low mortality during the succeeding months of winter, provided it is followed by a fairly high fall in autumn and winter; but if, after a heavy rainfall in summer, the winter becomes very dry, the death-rate will rise unusually high. On the other hand, a high rainfall in winter is beneficial only when preceded by a high fall the previous summer.

7. That a period of large number of rainy days is especially connected with one of low mortality.

8. That a year of medium amount of cloud is associated with a fairly uniform mortality. The lower it is in winter the greater will be the death-rate, especially if preceded by a period of great amount of cloud in summer.

9. That the influence of the wind, both in force and direction, is somewhat doubtful.

The following table shows the number of deaths from phthisis in Brisbane for each month of the year :—

TABLE T.

January ...	17	July... ..	26
February ...	22	August ...	26
March ...	22	September ...	22
April ...	28	October ...	18
May ...	30	November ...	24
June ...	31	December ...	23

Ratio per cent. for four periods of the year.

—	Jan.-Mar.	April-June.	July-Sept.	Oct.-Dec.	—
Brisbane ...	21.1	30.8	25.6	22.5	100.0
Queensland ...	22.3	26.1	27.5	14.1	100.0

In Brisbane the second quarter has the highest rate, while in the whole colony the third has the highest.

TASMANIA.

In the island of Tasmania the deaths are recorded in months as follows :—

TABLE V.

Month.	No. deaths. Phthisis.	Rate per cent.
January ...	47	11.50
February...	28	7.00
March ...	29	7.25
April ...	26	6.50
May ...	35	8.75
June ...	31	7.75

TABLE V.—Continued.

Month.	No. Deaths Phthisis.	Rate per cent.
July ...	29	7.25
August ...	38	9.50
September ...	33	8.25
October ...	36	9.00
November ...	31	7.75
December ...	38	9.50

Ratio per cent. for four periods of the year.

Jan.-Mar. 25.92	April-June 22.95	July-Sept. 24.94	Oct.-Dec. 26.19	100.0
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* * *

WESTERN AUSTRALIA.

Ratio per cent for four periods of the year.

Jan.-Mar. 17.98	April-June 23.02	July-Sept. 25.18	Oct.-Dec. 33.42	100.0
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CONCLUSION.

Now, for the present, at least, my task is done. At some future time I intend studying the disease from other points of view, and continuing my investigations, in the hope that, by becoming acquainted with the factors which cause the loss of so many valuable lives in every colony, we may adopt measures to prevent the spread of this terrible malady, and lessen the sufferings of those who can only exclaim—

“O, Life! thou art a galling load,
Along a rough, a weary road,
To wretches such as I!”

AN ESTIMATE OF THE RELATIVE PREVALENCE OF HYDATID DISEASE IN THE VARIOUS COLONIES OF AUSTRALASIA.

By E. C. STIRLING, M.D., F.R.C.S., F.R.S.,
SENIOR SURGEON TO THE ADELAIDE HOSPITAL.

In the course of the preparation of an article on hydatid disease, jointly by myself and Dr. Verco, we were led to make inquiries as to its prevalence in the Australasian colonies. That part of our collaboration fell to my share. Unfortunately, the necessary returns were not forthcoming in time to be available for the purpose intended; nor, indeed, were they as complete as they could be desired. Nevertheless, having regard to the importance of the subject of hydatid disease in Australasia, I think the information that has been accumulated is of sufficient interest to bring before this society, especially as the statistics submitted are of more recent date and cover larger ground than those previously published.

There are two feasible methods by which one may seek to acquire evidence as to the prevalence of hydatid disease. One may be based upon the returns of the offices of the various

registrar-generals of deaths of the colonies; the other upon those of the public hospitals. The objections to the former are that in many cases the suspected cause of death is not always the real one, even when the patient has been under the observation of a competent medical man; that, in the unfortunate condition of the medical Acts of some of our colonies, death certificates may be signed by those who are in no sense competent to make a diagnosis; and, lastly, that such returns cannot of course include the large number of cases which recover.

The second method, in which the proportion of cases of hydatid disease to the total number of admissions as in-patients is ascertained from the public medical institutions of the various colonies, is largely free from these objections when considered as a criterion of the prevalence of the disease. The objections to it are of another kind. It does not take note of the large number of cases treated in private, or the not inconsiderable number of those in which hydatids, unsuspected during life, are discovered on the *post-mortem* table. Experience has shown me that the difficulties of obtaining reliable and general returns which shall include these sources of information would have been very great, if not insuperable. No doubt there is the further fact also to be noted, viz., that there is a certain tendency for cases requiring operative treatment to gravitate from the country towards the metropolitan hospitals, but this will hardly constitute a source of error when the comparison is made between the different colonies themselves. A South Australian, in the country, may come to Adelaide for treatment, but he does not frequently go to another colony. On the whole, then, the second method which is here adopted affords much the better standard of comparison.

By the courtesy of the Hon. the Chief Secretary, printed forms were issued, through the co-ordinate Ministers of the other colonies, to every public hospital. I was extremely modest in the scope of my inquiries, and asked only for returns covering—

1. The total number of in-patients for each year from 1880 to 1894, or for as many of these years as possible.

2. The number of hydatid cases in each corresponding year.

3. The sex of these hydatid cases.

All of which particulars are easily and speedily accessible in properly-kept hospital records.

Taking the colonies as a whole, they have responded as completely as perhaps could be expected, with the exception of New South Wales, where many institutions of provincial

centres have remained deaf to my appeal. In some others, as will be seen, the returns, though furnished, were incomplete even as regards the simple details asked for. I take this opportunity of thanking all those medical officers and secretaries of hospitals who have been good enough to regard my request favourably, though I regret that I am unable to make my statements as comprehensive as they might have been had the returns been more generally completed.

The returns received enable me to deal analytically with a total aggregate of over half-a-million hospital patients in the seven colonies. The details of the analysis are shown in the following tables, which explain themselves:—

SOUTH AUSTRALIA.

TABLE A.—COMPLETE RETURNS.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
15	Adelaide ..	248	31,549	347	179	168	1 to 91
15	Burra ..	45	3,922	13	13	0	1 to 301
10	Jamestown ..	12	324	12	8	4	1 to 77
15	Kapunda ..	26	1,974	16	10	6	1 to 164
15	Mt. Gambler ..	62	3,958	58	25	33	1 to 68
15	Port Augusta ..	60	2,495	1	1	0	1 to 2,595
15	Wallaroo ..	32	1,820	8	5	3	1 to 202
			46,542	455	239	216	

TABLE B.

Hospital from which the returns were incomplete, but which, nevertheless, distinguish between the sexes in hydatid disease.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
4	Port Lincoln ..	10	—	3	2	1	—

TABLE C.

Hospital which does not distinguish between the sexes.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
12	Narracoorte ..	22	1,477	30	—	—	1 to 74

SOUTH AUSTRALIA—(Continued.)

SUMMARY FOR SOUTH AUSTRALIA.

	Total No. of in-patients.	Total No. of Hydatid cases.
Table A ...	46,542	455
Table C ...	1,477	20
	48,019	475

Showing one case of hydatid disease for every 101 cases admitted, or a percentage of .99.

PROPORTION BETWEEN THE SEXES AFFECTED.

	Total No. of Hydatid cases.	Males.	Females.
Table A ...	455	239	216
Table B ...	3	2	1
	458	241	217

Showing a proportion of 100 males to 90 females.

VICTORIA.

TABLE A.—COMPLETE RETURNS.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
18	Alfred (Melb.)...	140	18,143	163	89	74	1 to 111
18	Amherst	56	4,534	36	19	17	1 to 136
18	Bairnsdale	18	894	4	3	1	1 to 148
15	Ballarat	150	15,479	156	75	81	1 to 99
15	Bendigo	150	8,884	71	37	34	1 to 134
15	Castlemaine	75	3,132	13	11	2	1 to 629
15	Clunes	40	2,077	11	4	7	1 to 189
13	Colac .....	...	953	14	7	7	1 to 41
13	Daylesford	48	2,172	4	1	3	1 to 543
13	Dunolly .....	...	4,703	35	13	22	1 to 134
13	Echuca	44	2,761	15	9	6	1 to 184
13	Geelong	92	10,167	75	38	37	1 to 135
15	Gippsland (Sale)	42	3,587	28	13	15	1 to 138
15	Hamilton	35	3,862	41	21	20	1 to 84
15	Horsham	30	2,910	16	10	6	1 to 182
15	Inglewood	55	4,058	37	24	13	1 to 164
15	Kilmore .....	...	2,098	0	0	0	...
15	Kyneton .....	...	6,804	20	14	6	1 to 334
15	Malden	26	733	0	0	0	...
15	Mansfield	30	1,652	5	2	3	1 to 330
15	Melbourne	327	59,459	281	169	112	1 to 112
12	Nhill	23	1,267	14	10	4	1 to 89
12	Portland .....	...	258	0	0	0	...
12	St. Arnaud	50	2,324	28	17	11	1 to 137
15	St.owell	68	3,730	44	39	5	1 to 86
14	Swan Hill	29	1,491	3	3	0	1 to 710
15	Wangaratta	35	3,905	15	10	5	1 to 260
12	Warrumbool	71	1,387	5	2	3	1 to 277
15	Wood's Point	13	1,355	0	0	0	...
			183,183	1,152	639	513	

VICTORIA.—(Continued.)

TABLE B.

Hospitals from which the returns were incomplete, but which nevertheless distinguish between the sexes in hydatid cases:—

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of Hydatid.	Males.	Females.
15	Ararat ..	64	...	18	10	8
10	Creswick ..	35	...	4	4	0
15	Hemthoote ..	15	...	31	23	8
15	Maryborough ..	70	...	25	11	14
15	Melbourne (Homocephalic) ..	...	...	13	12	1
15	Mooroopna ..	80	...	13	6	7
15	Ovens ..	125	...	114	72	42

TABLE C.

Hospital which does not distinguish between the sexes.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of Hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
15	Port Fairy ..	34	528	1	?	?	1 to 528

SUMMARY FOR VICTORIA.

	Total No. of in-patients.	Total No. of hydatid cases.
Table A ...	183,183	1,152
Table C ...	528	1
	183,711	1,153

Showing one case of hydatid disease for every 159 cases admitted, or a percentage of .64.

Proportion between the sexes affected:—

	Total No. of hydatid cases.	Males.	Females.
Table A ...	1,152	639	513
Table B ...	114	72	42
	1,266	711	555

Showing a proportion of 100 males to 78 females.

NEW SOUTH WALES.

TABLE B.

Hospitals from which the returns were incomplete, but which nevertheless distinguish between the sexes in hydatid cases.

No. of years antecedent to 1st Jan., 1895, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.
2	Dubbo ..	...	...	5	5	0
5	Broken Hill ..	30	...	...	...	...

NEW SOUTH WALES.—Continued.

TABLE C.

Hospital which does not distinguish between the sexes.

No. of years antecedent to 1st Jan., 1886, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
15	Sydney ..	324	44,039	137	..	..	1 to 347

TABLE A.—COMPLETE RETURNS.

No. of years antecedent to 1st Jan., 1886, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of Hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
10	Albury ..	40	2,761	12	12	0	1 to 239
10	Bathurst ..	35	4,497	23	20	3	1 to 204
6	Ootacamundra ..	12	474	1	0	1	1 to 474
10	Deniliquin ..	26	1,967	7	6	1	1 to 279
9	Goulburn ..	46	1,646	8	3	5	1 to 205
9	Narrandera ..	20	1,365	11	9	2	1 to 169
11	Prince Alfred (Sydney) ..	..	25,362	293	151	142	1 to 86
8	Children's Hospital (Sydney) ..	62	2,421	14	0	5	1 to 173
14	Walgett ..	13	907	6	6	0	1 to 151
9	Westworth ..	16	887	10	7	3	1 to 89
15	Wilcannia ..	22	2,219	0	0	0	..
			44,986	551	233	158	

SUMMARY FOR NEW SOUTH WALES.

	Total No. of in-patients.	Total No. of hydatid cases.
Table A. ...	44,986	381
Table C. ...	44,039	127
	89,025	508

Showing one case of hydatid disease for every 175 cases admitted, or a percentage of .57.

PROPORTION BETWEEN THE SEXES AFFECTED.

	Total No. of hydatid cases.	Males.	Females.
Table A. ..	381	233	158
Table B. ...	9	8	1
	390	231	159

Showing a proportion of 100 males to 69 females.

TASMANIA.

No. of years antecedent to 1st Jan., 1886, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
15	Hobart ..	133	16,010	..	..	..	..
15	Lamington ..	120	12,270	..	..	..	..
			28,280	..	..	..	..

SUMMARY FOR TASMANIA.

Total No. of in-patients.	Total No. of hydatid cases.
28,280	146

Showing one case of hydatid disease for every 194 cases admitted, or a percentage of .52.

PROPORTION OF THE SEXES AFFECTED.

Total No. of hydatid cases.	Males.	Females.
146	89	57

Showing a proportion of 100 males to 64 females.

WESTERN AUSTRALIA.

No. of years antecedent to 1st Jan., 1886, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
8	Perth ..	57	2,030	5	4	1	1 to 406
15	Geraldton ..	23	1,198	2	1	0	1 to 1,198
2	Roeburne ..	18	188	0	0	0	..
15	Newcastle ..	8	401	0	0	0	..
6	York ..	16	551	4	4	0	1 to 138
			4,348	10	9	1	

Incomplete returns were received from the hospitals at Albany, Vasse, Bunbury, and Guildford, and in the last-named three it is stated that no cases of hydatids are recorded.

SUMMARY FOR WESTERN AUSTRALIA.

Total No. of in-patients.	Total No. of hydatid cases.
4,348	10

Showing one case of hydatid disease for every 435 cases admitted, or a percentage of .23.

PROPORTION OF THE SEXES AFFECTED.

Total No. of hydatid cases.	Males.	Females.
10	9	1

Showing a proportion of 100 males to 11 females.

NEW ZEALAND.

The returns from New Zealand give aggregate totals only, from all hospitals (stated to be 39 at present date), but without separate details for each institution. The period over which the returns extend is comprised between the years 1882 and 1893 inclusive.

Total No. of in-patients.
85,713

Total No. of hydatid cases.
162

Showing a proportion of one case of hydatid disease to every 529 cases admitted, or a percentage of .19.
The sexes affected are not distinguished.

QUEENSLAND.

TABLE A.—COMPLETE RETURNS.

No. of years antecedent to 1st Jan. 1894, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
5	Children's Hospital, Brisbane	62	2,907	2	1	1	1 to 1,453
15	Cairns ..	60	4,802	1	1	0	1 " 4,802
15	Charters Towers	65	5,339	0	1	0	1 " 5,339
7	Cook District ..	59	3,944	0	0	0	
7	Oroydon ..	23	1,486	0	0	0	
5	Goondiwindi	14	386	0	0	0	
15	Border Hosp...	103	8,629	4	1	3	1 " 2,166
12	Ipswich ..	32	1,210	2	2	0	1 " 655
15	Herberton and Tinaroo ..	15	772	0	0	0	
15	Kennedy, Bowen	96	6,795	3	1	2	1 " 2,265
12	Maryborough ..	..	4,913	4	1	3	1 " 1,228
4	Toowoomba ..	..	463	0	0	0	
15	Torres Straits ..	17	1,122	1	0	1	1 " 1,122
15	St. George ..	40	2,978	10	9	1	1 " 298
	Warwick ..						
			46,246	29	17	12	

TABLE B.

Hospitals from which the returns are incomplete, but which nevertheless distinguish between the sexes.

No. of years antecedent to 1st Jan., 1894, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.
6	Gympie ..	60	..	4	1	3
4	Mt. Morgan ..	24	..	1	0	1
3	Peak Downs ..	32	..	0	0	0
8	Rockhampton ..	100	..	3	1	2
7	Victoria (Barraldine) ..	..	..	0	0	0
				8	3	5

TABLE C.

Hospital which does not distinguish between the sexes.

No. of years antecedent to 1st Jan. 1894, over which returns extend.	Name of Hospital.	No. of beds.	Total No. of in-patients.	Total No. of cases of hydatid.	Males.	Females.	Proportion of hydatid cases to other patients.
7	Brisbane ..	227	32,332	28	..	..	1 to 1,406

SUMMARY FOR QUEENSLAND.

	Total No. of in-patients.	Total No. of hydatid cases.
Table A ...	46,246	29
Table B ...	32,332	23
	78,578	52

Showing one case of hydatid disease for every 1,511 cases admitted, or a percentage of .07.

PROPORTION BETWEEN THE SEXES AFFECTED.

	Total No. of hydatid cases.	Males.	Females.
Table A ...	29	17	12
Table B ...	8	2	6
	37	19	18

Showing a proportion of 100 males to 95 females.

I.

GENERAL SUMMARY SHOWING RELATIVE PREVALENCE OF HYDATIDS IN THE SEVEN COLONIES OF AUSTRALASIA IN ORDER OF THE FREQUENCY OF THE DISEASE.

Colony.	Total No. of in-patients.	Total No. of hydatid cases.	Proportion of hydatid cases to all other in-patients.	Percentage of hydatid cases.
S. Australia ..	48,019	475	1 to 101	.99
Victoria ..	183,711	1,183	1 " 159	.64
N. S. Wales ..	89,025	506	1 " 175	.57
Tasmania ..	28,280	146	1 " 194	.52
W. Australia ..	4,348	10	1 " 435	.23
New Zealand ..	85,713	162	1 " 529	.19
Queensland ..	78,578	52	1 " 1,511	.07
Grand total ..	517,674	2,406		

Showing a general average for the seven colonies of one hydatid case for every 206 in-patients, or a proportion of .48 percent.

II.

GENERAL SUMMARY SHOWING PROPORTION BETWEEN THE SEXES AFFECTED.

Colon	Hydatid cases.	Males.	Females.	No. of females to 100 males.
South Australia ..	458	241	217	90
Victoria ..	1,266	711	555	78
New South Wales ..	290	221	169	69
Tasmania ..	146	89	57	64
Western Australia ..	10	9	1	11
New Zealand ..	162	..	..	..
Queensland ..	52	19	18	95
		1,300	1,007	77

Showing in the aggregate a proportion of 100 males to 77 females.

The principal facts with regard to the relative prevalence of hydatid disease appear in the first general summary on this page, by which it will be seen that our own colony of South Australia enjoys the unenviable reputation of standing first on the list, having practically one

case of hydatids to every hundred of all other cases admitted into hospitals, the other colonies following in the order shown.

Taking individual hospitals, that of Colac (Vic.) heads the list with 1 to 41; followed by Mount Gambier (S.A.), 1 to 68; Narracoorte (S.A.), 1 to 74; Jamestown (S.A.), 1 to 77; Stawell (Vic.), 1 to 85; Prince Alfred (Sydney), 1 to 86; Nhill (Vic.), 1 to 89; Wentworth (N.S.W.), 1 to 89; Adelaide (S.A.), 1 to 91; Hamilton (Vic.), 1 to 94; Ballarat (Vic.), 1 to 99.

Comparing the hospitals of the various capitals (excepting in the case of New Zealand, where the returns do not afford the necessary information), they stand in the following order:—

Prince Alfred alone, 1 to 86	Adelaide, 1 to 91
Sydney Hospital alone 1 to 347	Sydney, 1 to 165
Melbourne Hospital alone, 1 to 212	Melbourne, 1 to 175
Alfred alone, 1 to 111	Hobart, 1 to 195
	Perth, 1 to 406
	Brisbane, 1 to 1,406

Other comparisons may be made by reference to the detailed tables.

It will thus be seen that, if we except the relatively small Jamestown Hospital, there is a special concentration of hydatid disease in the following localities:—The South-eastern district of South Australia; the Western district of Victoria, and the capital cities of Adelaide, Melbourne and Sydney. In the case of these cities the concentration no doubt is largely due to the cause mentioned, viz. that there is a tendency for patients to seek advice at, or to be sent by their medical advisers for operation to, the large hospitals, and if, on this account, we remove from consideration these three centres, the figures fully confirm the accepted belief that the South-eastern district of South Australia and the Western district of Victoria are those parts of Australasia where hydatid disease is most prevalent.

It is impossible to avoid asking oneself the question how, on our generally accepted theories as to the conditions which influence the distribution of hydatid disease, Queensland comes to stand so low in the table? What is there in the special circumstances of this colony which gives it a so relatively small proportion of cases? Or why should there be such a difference between Tasmania and New Zealand? I confess I am unable to offer any explanatory suggestion, but the question is well worth inquiry, and there are other points which the figures I have submitted suggest. To attempt to do so, however, to-night would add to the burden of statistics I have

been obliged to lay upon you and possibly, also, to fail in arriving at a satisfactory conclusion.

I cannot, however, conclude this paper without reference to the labours of our late lamented colleague Dr. Thomas in the department of hydatids which he made particularly his own. The figures I have submitted may be regarded as a continuation, on similar lines, of a part of the work instituted by him, and, perhaps, a word as to a comparison between our results may not be without interest. Briefly, the hospital returns, obtained by Dr. Thomas, moving on the same lines and covering 284,340 patients from the four colonies only of Victoria, New South Wales, South Australia, and New Zealand, gave a percentage of one hydatid case to 217 in-patients.

If I select these four colonies from my own table the equivalent figures are 1 to 177.

For the individual colonies, the ratio, as ascertained by Dr. Thomas in his work on hydatid disease (Ad., 1884), is as follows, dealing with a varying number of years antecedent to 1880:—

Ratio according to Dr. Thomas's figures.	Ratio as determined by present writer.
Victoria ... 1 to 174	1 to 159
South Australia (Ad. Hospital only) ... 1 " 222	1 " 101
Mt. Gambier ... 1 " 62	1 " 68
New South Wales ... 1 " 380	1 " 175
New Zealand ... 1 " 746	1 " 529

In the case of the other colonies a comparison is not possible on the same lines.

From a comparison of the figures of Dr. Thomas with my own, which for convenience are here repeated in juxtaposition, it will be seen that not only has South Australia displaced Victoria as head of the list, but that also in each case, except in that of Mt. Gambier, there is a substantial increase in the ratio for the more recent period. This suggests either that hydatids have actually become more prevalent, or that they are merely recognised with greater frequency, or possibly a combination of both causes. Into this discussion, however, I am unable to enter at present, nor perhaps are the data sufficient.

The proportion of each sex affected is shown in the second general summary on page , and requires no comment in this place.

N.B.—Since the above tables were compiled, the following returns have been received:—Townsville (Q.), 3,704 in-patients (1890-1894 inclusive); 6 cases of Hydatids, all males. Mackay District (Q.), no cases of Hydatids reported.

CLINICAL LECTURES ON HYDATID DISEASE.

BY ALFRED AUSTIN LENDON, M.D. LOND.,
LECTURER ON FORENSIC MEDICINE AND
ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

II.—THE ADVENTITIOUS SAC OF HEPATIC HYDATIDS.—(Continued from page 263).

(d) *Death of the Cyst without rupture.—Degeneration of the Hydatid—Behaviour of the Sac.*

THERE is, of course, a limit to the size to which a hydatid cyst of the liver may attain. The larger the cyst the more likely it is to come under surgical observation and treatment, and also the larger the cyst the more likely it is to succumb to accidental rupture. Should, however, the hydatid escape death from accident, or at the hands of the surgeon, a time must come at length when it will die of old age or from natural causes. To what age an hepatic cyst may live under favourable circumstances is doubtful, as there are no precise data to guide one in forming an estimate. To what causes its death may be attributed is also a matter for speculation. Does the cyst die of sheer old age, or because it can no longer obtain nutriment owing to degenerative changes having occurred in the sac? If we examine degenerated cysts we frequently find them stained with bile, and I think it is probable that osmosis of bile is sufficient to kill the hydatid, although upon this point we require further evidence. This, however, even if it be the most frequent, cannot be the only cause of natural death in liver cysts.

When the hydatid has died it may be regarded as an inert aseptic foreign body: whilst it no longer requires nourishment from the adventitious sac, the latter, on the other hand, continues very slowly to absorb from the cyst its fluid contents. A degeneration of the granular endo-cyst occurs, and the hydatid fluid becomes turbid and opalescent, showing under the microscope fatty and granular *débris* of tissue. The hydatid membrane (the laminated ecto-cyst) contracts, and becomes folded up. Later on the turbid fluid becomes puriform in appearance, and, still later, it may be replaced by a pultaceous material resembling that

seen in atheromatous cysts, or by a mortary powder enclosed between the folds of the still distinguishable hydatid membrane.

The adventitious sac also shrinks, but it does not become folded up like the cyst; it merely increases in density, and it is probable that, with diminution in size, and with loss of nutritive function, its vascularity is correspondingly much diminished. At all events, degenerative changes are also seen in it; its inner surface loses its shiny appearance, and becomes smeared with lymph; the sac itself may become as tough as fibro-cartilage, and perhaps calcified in patches. Dr. Davies Thomas reported¹ instances in which, at the autopsies, it was found that the sac had shared in cancerous and in amyloid infiltrations of the liver.

(e) *Rupture of the Hydatid into its Sac, and the effects thereof.*

It is probably a comparatively rare event for a hydatid cyst of the liver in man, unless it be situate quite in the centre of the liver, to die a natural death; it more often becomes ruptured, allowing the escape of its contents into the adventitious sac, and causing at the same time symptoms of shock, of fever, or of ptomaine poisoning². After rupture of the cyst some very striking changes take place in the walls of the sac. Owing to absorption of some of the fluid thus poured into the interior of the sac, the tension within it is usually lessened, unless the pressure of the abdominal walls and of the abdominal viscera compensates for the loss of fluid; so that the tumour may become smaller for the time, although it may subsequently enlarge again.

The diminished intra-saccular tension also allows the intra-hepatic portion of the sac to bulge inwards, together with the adjacent liver substance. In a case³ upon which I was operating through the thoracic wall, the interior of the sac had such a deceptive feeling that both my colleague (Dr. Hayward) and myself concluded that we were exploring with our fingers the pleural cavity, and that we felt the compressed lobes of the right lung instead of, as in reality, the interior of the liver.

This diminished tension also explains the frequency with which, after rupture of the hydatid, bile is effused into the sac, the walls of the smaller bile ducts being very delicate in structure. When this happens, the adventitious sac itself is generally found to be deeply stained with

1. *Medical Times and Gazette*, Nov. 6, 1890.

2. *Vide Case III.*

3. *Aust. Med. Gaz.*, Mar. 1893, p.

bile, the mother cyst usually becomes of a deep orange-yellow colour, and later on assumes a transparent gelatinous appearance, whilst daughter cysts may be seen either untinted or else with a slight green tinge, from transudation of the bile pigment only into their interior. If no daughter cysts be present, and suppuration do not occur, the mother cyst may still further undergo change, so that to the naked eye it is merely a yellow-ochrey fluid of syrupy consistence. It is probably owing to the antiseptic qualities of the bile that the dead ruptured hydatid can remain quiescent and unoffending for years; although, even after the lapse of 20 years, it may give rise to symptoms which call for its removal by operation. Blood is much less frequently effused into the adventitious sac in any quantity. I had the opportunity, however, of seeing a case⁴ in which the quantity of organised blood-clot was so great, that the abdominal tumour, which was being operated upon, presented, when incised, an appearance very much like that of a soft sarcoma, but at last a piece of hydatid membrane, quite inconsiderable in size, was detected.

Masses of red pigment of varying size are also met with, which may possibly represent the remains of an old hæmorrhage, although Dr. Davies Thomas arrived at the opinion that the pigment consisted of bilirubin.⁵ As, however, it is believed that bilirubin and hæmatoidin are identical, the real source of the pigment may be the blood-vessels. In the case related above, I conceive the hæmorrhage to have been arterial. I do not think that it has yet been shown that after rupture of the cyst the veins of the inner surface of the sac become varicose, so as to give rise to bleeding.

As a rule, the effusion of bile tends to keep the dead hydatid aseptic whilst the various changes previously described in are in progress. Another result of the effusion may be that the abdominal tumour (if one be present) appears to be enlarging again. It is conceivable that similar enlargement may also occur where no bile is effused, the explanation being that an effusion of serum occurs from the wall of the sac, which is now to all intents a serous cavity, and that, owing to the deposition of plastic lymph on the wall of the sac, the serum thus effused cannot readily be reabsorbed. We have seen that the tumour may enlarge again as a consequence of hæmorrhage into the sac, and later on we shall have to consider its enlargement on account of suppuration.

CASE III.—ILLUSTRATING THE SYMPTOMS ATTENDING RUPTURE OF THE CYST INTO ITS SAC—EFFUSION OF BILE—NECROSIS OF SAC AFTER OPERATION—PERSISTENCE OF BILIARY SINUS AND JAUNDICE.

Wm. J., *æt.* 18 years, Alexandra ward, Adelaide Hospital, November 20th, 1893. Patient had noticed an abdominal swelling in the hepatic region growing painlessly for a year. Five weeks before admission, when standing up doing nothing, he felt a sudden pain in the abdomen, which lasted for five minutes; he felt hot at the time, and shivered later on: urticaria appeared, which lasted until next day: there was temporary dyspnoea, but no faintness. Immediately after the pain the tumour became much smaller, but during the last five weeks it had gradually enlarged again. Abdominal section was performed by Dr. Poulton, December 13th; and a large bile-stained mother cyst removed, together with pints of bile-stained fluid, but no daughter cysts. On January 6th, 1894, a large piece of sac, stained a dark green colour, thick and tough, measuring 8in. by 5½in., was washed out; smaller pieces were extruded or washed out at other times: there was no suppuration. A sinus discharging bile persisted, and later on patient became jaundiced. In May, 1895, he was re-admitted with both jaundice and a biliary fistula.

(f) Peritoneal Adhesions without suppuration of the Sac.

Under ordinary circumstances, the sac is not prone to become inflamed, so that the parasite may attain to a great size without the peritoneal surface becoming adherent either to the viscera or to the abdominal wall, just as, for example, the pregnant uterus invades the abdominal cavity, pushing the viscera aside, but not contracting adhesions to them. On the other hand, just as we find an ovarian tumour with or without adhesions, so we may find a hydatid cyst, and in the latter case the reason is often less obvious. My impression is, that with living hydatid cysts peritoneal adhesions are more frequent when the parasite is on the upper surface of the liver: as to the origin of such adhesions, I think they may be explained as arising, not from inflammation of the sac, for that would be fatal to the hydatid cyst, but from the apposition of the diaphragmatic peritoneum to the bulging sac being less disturbed by the movements of respiration, than the parietal peritoneum over an infra-hepatic tumour would be. In case II.⁶ we have an instance of a fairly large cyst on the convexity of the liver without adhesion to the diaphragm. In a case reported by Dr. Verco,* to which I shall have occasion to refer, there were

4. *Aust. Med. Gaz.* Dr. T. A. G. Hamilton's exhibit, p. 338, vol. for 1893.

5. Hydatid Disease. Vol. II., p. 18.

6. Vide "f."

*Dr. J. C. Verco, Trans. S. A. Branch British Medical Association November, 1896.

adhesions to the diaphragm; here, although the main growth of the tumour was downwards into the abdominal cavity, the cyst had excavated the whole of the right lobe of the liver. When adhesions have occurred between the liver and the diaphragm, the latter may in turn become adherent to the base of the lung.

Adhesions may also occur between the sac of an infra-hepatic hydatid and any of the hollow viscera of the abdomen, or with the parietal peritoneum.

(g) *Rupture of both Cyst and Sac prior to Suppuration.*

It must not be forgotten that occasionally the sac ruptures as well as the cyst, so that the fluid contents, and perhaps daughter cysts, escape into the peritoneal cavity. The rupture may be the result of injury, or it may be spontaneous, and it is predisposed to by thinness of the adventitious sac. If only a little clear fluid leaks into the peritoneal cavity, the symptoms may be slight and similar to those which occur when the hydatid ruptures into its sac; if minute daughter cysts escape also, there is reason to suppose that they may gravitate to the pelvis, and there become attached to the peritoneum,* so that a sort of general infection occurs similar to that after rupture of a papillomatous cyst of the ovary. If a large quantity of fluid or a great number of daughter cysts escape into the peritoneal cavity, the result is generally a rapidly-fatal peritonitis. Supposing adhesions to have formed, rupture may take place into the stomach or intestines, or, if the hydatid be situate on the convex surface of the liver, it may rupture into the pleural cavity or into the lung.

EXTRACTS FROM CURRENT FOREIGN MEDICAL LITERATURE.

BY C. A. ALTMANN, M.B., F.R.C.S., ED., OF FORT LINCOLN, SOUTH AUSTRALIA.

Ulcer of Stomach, treated by Scraping and Dilatation of Pylorus after Loreta (Prof. A. Podres, Centralbl. f. Chirurgie, No. 15, 1895.) The patient, a man *æt.* 34, had been ill for about two years. When admitted into hospital he was very weak, and vomited from one to two hours after each meal, the vomited matters now and again containing blood. He complained of great pain in the neighbourhood of the pylorus, and was subject to constipation. The lactic and hydrochloric acids were diminished in quantity. A laparotomy was performed, and the pylorus and duodenum were found to be fixed for a considerable distance by cicatricial adhesions. The stomach was opened about 6 cm. from the pylorus, and a round ulcer was found occupying the fundus near the pylorus and a part of the lesser curvature. There was also extensive cicatricial degeneration of the pyloric portion so that the pyloric orifice admitted with difficulty the point of a dressing forceps. The pylorus was dilated first with forceps

and afterwards by means of two fingers introduced into the opening, without causing any apparent injury to the parts. The ulcer was scraped partly with the finger-nail, and partly with a sharp spoon, the hæmorrhage being controlled by hot applications. The stomach wound was sewn up with Lembert's, and the abdominal one with button sutures. Recovery was uninterrupted; the vomiting and pains disappeared at once; the patient regained his appetite, slept well, increased in weight, and left the hospital in three weeks. Five months after he was found to be in good health, he ate well, and was following his usual occupation.

Extirpation of the Spleen (Postempski, Bull. d. R. Accad. med. di. Roma. Vol. xv., p. 66).—The patient, a peasant woman, *æt.* 18, had been suffering from malaria since childhood, without, however, being confined to bed. During the last 18 months she had noticed a slowly-growing tumour in the left hypochondrium, which caused her considerable trouble. In addition to this she presented the typical appearances of malarial cachexia. The spleen was extirpated without any particular difficulty, the pedicle being ligatured *en masse*. The patient made a smooth recovery, and there was a rapid improvement in her general condition. The most striking result was that manifested by the red blood corpuscles, which showed a marked increase in numbers.

On the day of operation there were 3,733,900 red cells per c.mm.

" 5th day after "	" "	3,713,000	" "	" "
" 14th " "	" "	3,984,000	" "	" "
" 25th " "	" "	4,032,000	" "	" "
" 32nd " "	" "	5,763,000	" "	" "

No mention is made of the white corpuscles.

The removed organ measured 30 c.m. in length, and 15 c.m. in width, and weighed 2 kgrs. (nearly 4½ lbs.).—*Centralbl. f. Chirurgie*, No. 12, 1895.

Antipyrine as a Local Styptic in a Case of Rupture of an Aortic Aneurism (K. Broussolle, La Semaine Médicale, April 10th, 1895).—When Broussolle arrived, the patient had already lost a sufficient quantity of blood to cause fainting, and the bleeding was to some extent being controlled by forcible pressure on the sternum, but the loss became again very considerable as soon as this pressure was relaxed. The rupture, which was about 2 c.m. long, was rapidly cleared of clots, and 4 grammes of antipyrine were dusted on to it; a pad of absorbent cotton placed on top, and retained by means of a bandage around the body. The antipyrine caused the immediate formation of a coagulum, which at first moderated, and afterwards completely checked the loss of blood. There was no recurrence of the hæmorrhage. The patient died 48 hours afterwards from pulmonary complications.

The Mechanical Treatment of Nocturnal Incontinence of Urine (Stumpf, La Semaine Médicale, June 19th, 1895).—Dr. Stumpf has obtained excellent results in the treatment of nocturnal incontinence by a simple mechanical method, which consists in maintaining the pelvis of the little patient in an elevated position during sleep, so that the pelvis with the vertebral column forms an angle of about 140°. The head should rest on a low pillow. In this position the urine is prevented by gravity from pressing on the neck of the bladder, and thus exciting involuntary micturition. Whether this explanation be the correct one or not, the author has succeeded by this method in bringing about a rapid and lasting cure in all his cases (12 in number). The treatment should generally be continued for three

*Graham on Hydatid Disease. Plate xxi.

weeks, after which the patient may be allowed to resume the natural position without fear of a relapse.

Prostatic Hypertrophy Cured by Castration (Drs. F. and A. Koven, Norsk. Mag. for Loegevidenskaben, Jan., 1895). The patient was 66 years of age and suffering from hypertrophy of the prostate and retention of urine. The enlarged gland measured 4 cm. in depth and 6 cm. in width. On July 18th both testicles were removed. During the first fortnight after the operation a catheter had to be used, although the prostate began to soften and diminish in size from the seventh day. In the beginning of August the patient commenced to urinate naturally, and the gland now measured 3 cm. by 4 cm. In November a rectal examination revealed the measurement of the gland to be only 2 cm. by 3 cm. The patient now passed water in quite a normal manner, the stream was good, and he had to rise only once in the night. In short, the hypertrophy and its symptoms had disappeared.

Uterine Cancer treated with Parenchymatous Injections of Salicylic Acid (F. Fafous, Med. Obstr. xliii. 1895, No. 1). The author, acting on Bernardt's advice, has tried the palliative effect of parenchymatous injections of a solution (6 per cent. in alcohol 60 per cent.) of salicylic acid in seven cases of inoperable uterine cancer with the following satisfactory results:—There was almost complete cessation of metrorrhagia, the foetid and irritating discharge disappeared, the pain lessened, the general condition improved, and the progress of the affection became less rapid.

The following is the method of procedure:—The vagina is regularly syringed for some days before with an antiseptic solution, and once again just before injecting. The uterus having been exposed by a sinist speculum, 1-4c.c. of the above solution are injected into five or six different points of the diseased portion of the neck, the needle being pushed in about one third to half an inch. The syringe employed is an ordinary Pravaz, with a long fine needle. The vaginal portion is then dried with cotton wool, dusted with iodoform, and the vagina plugged, with two or three tampons soaked in a solution of iodoform and glycerine. The patient is put to bed, and kept there quietly for the rest of the day. In the evening, or on the following morning, the tampons are removed, and the vagina well irrigated.

The first injections are generally followed by rather profuse hæmorrhage, but this becomes less as the injections are repeated.

In the majority of cases the injections are painful; the pain, however, subsides rapidly. There are no untoward secondary symptoms of any kind. The injections must be repeated more or less frequently according to the gravity of the case, and intensity of the patient's sufferings.

Bilateral Gangrene of the Lower Extremities in the course of Typhoid Fever (Duchene, Med. Moderne, No. 3, 1895).—A strong, healthy girl, æt. 18, fell ill with typhoid marked by early adynamia, feeble, intermittent pulse, and feeble heart sounds. About the third week first one and afterwards the other leg became painful. In a short time gangrenous spots appeared in both feet. These patches spread, and finally involved the left leg as far as its lower third, and the right leg as far as the calcaneo-astragaloid joint. The line of demarcation appeared about three weeks after the beginning of the gangrene. The patient recovered with both lower extremities mutilated to the extent above indicated. (Centrb. f. Inn. Med., May 18th, 1895).

PROCEEDINGS OF BRANCHES.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE usual monthly meeting of the New South Wales Branch was held in Sydney on Friday evening, 26th July, 1895, Dr. E. J. Jenkins (president), in the chair; Drs. Crago, Chenhall, Furnival, Rennie, Megginson, Macdonald Gill, Colpe, Lennhoff, Todd, Jas. Macleod, Sydney Jones, Knaggs, Schrader, Carruthers, G. A. Marshall, Faithfull, Quaise, Fiachi, Pockley, Van Someren, Angel Money, O'Reilly, Weekes, Scot Skirling, Armstrong, Pickburn, Clay, Lilie, Walton Smith, Neill, J. A. Dick, Abbott, Thos. Dixon, Martin, Chisholm, F. W. Marshall.

The minutes of the previous meeting were read and confirmed.

The President announced that the hon. secretary (Dr. Huxtable) was in a very critical state of health.

The PRESIDENT stated that the following gentlemen had been elected members of the branch:—Dr. E. J. Haynes, Perth; Dr. G. L. Lawson, Goulburn; Dr. O. O. Birch, Liverpool; Dr. G. Gillon, Darlinghurst; Dr. H. Lilie, Sydney; W. Short, Corowa; Dr. P. J. Kelly, Balmain.

New members proposed for election at the council meeting next after the present monthly meeting:—Dr. W. J. Nickson, Newcastle; Dr. V. E. Ludlow, Newcastle; Dr. R. H. Treloar, Wickham; Dr. W. L. Eames, Newcastle; Dr. J. W. Hart, Barraba; Dr. T. F. Wade, Wollongong.

Dr. G. A. MARSHALL showed the following case of sporadic cretinism:—E. M. L., female, aged 7 years and 10 months. Presented all the typical appearances and symptoms of cretinism. Intelligence slight; could say a few simple words; could walk, but would remain where placed till removed; would not answer when called, and took very little notice of her surroundings. Height, 31½ inches; weight, 28 lbs. Began treatment on August 10th, 1894, by giving one tabloid, 5grs. thyroid ext. (B. W. & Co.) every second day. Improvement began very soon. In five weeks she had gained half an inch in height; her skin had become soft and loose, and the supra-clavicular pews had disappeared. Her bowels, which had acted about once a week, now acted daily; she had begun to take notice of her surroundings, and to increase her vocabulary rapidly. She was somewhat restless for the first few weeks. After the second month the dose was increased to one 5gr. tabloid every day, and afterwards one 5gr. tabloid was added on alternate days. This amount she has continued to take up to the present, July 26th, 1895, nearly a year since treatment began. She has improved remarkably, both in intellect and physically. Her height is 37½ inches—a gain of 6½ inches—and her weight is 35lbs. She runs about all day, and joins the other children in their games, and can ask for everything she wants. Her expression is much more intelligent.

Dr. RENNIE said the progress in the case exhibited by Dr. Marshall was rather in favour of its being one of myxœdema in a young subject. A case he (Dr. Rennie) had exhibited some time ago at the medical section of the Royal Society had improved under the thyroid treatment, but the improvements had been very slow.

Dr. MACDONALD GILL said the case of sporadic cretinism which he had intended to exhibit at this meeting had been under the thyroid treatment for about nine days, and the only improvement was in the skin. It was always difficult to diagnose these cases. In his

(Dr. Gill's) case there were no symptoms until the child was 18 months old. The patient was now 28 years old.

Dr. SCOT SKIRVING said he would like to know what the difference really was between infantile myxedema and sporadic cretinism.

Dr. ANGEL MONEY said he would like to know what position Dr. Rennie took up with regard to this matter. He (Dr. Money) was of opinion that sporadic cretinism was congenital, and myxedema was not.

Dr. BENNIE said his opinion was that sporadic cretinism was a congenital condition, and myxedema was an acquired condition.

A CONSUMPTIVE HOSPITAL FOR NEW SOUTH WALES.

Dr. SYDNEY JONES moved the following resolution:—
"That, in the opinion of this Branch, the establishment of a hospital for the cure of consumption in this colony is urgently required."

Dr. SYDNEY JONES said:—The resolution, which I have the honour to move, reads as follows: "That, in the opinion of this Branch, the establishment of a hospital in this colony for the cure of consumption is urgently required." Please to observe that I use the words "cure of consumption." I do not advocate the founding of a hospital or asylum for the reception of those who are suffering from the disease in its advanced stages, and in whose cases there is no reasonable prospect of cure. Some provision already exists for such cases at Thirimere and elsewhere. I think, perhaps, the best way to make clear to you the class of consumptive sufferers whose needs the proposed hospital is designed to meet, will be to describe what is indeed only too familiar to us all. A young man enters your consulting room looking somewhat thin, and perhaps anæmic. He tells you that for some months he has been out of sorts, run down, not quite up to his work (which, however, he has continued to do); his appetite is poor; he has a slight cough, but no large amount of expectoration. A few days before he visited you he coughed up a little blood. This has alarmed him, and induced him to consult a physician. Upon examination you find the physical signs of consolidation, without softening, at one apex only. His circulation is feeble, but not very rapid, and there are no secondary changes in his liver or kidneys. Perhaps he belongs to the well-to-do-classes. You tell him that he has a slight affection of one lung, and that to regain his health he must leave Sydney and lead an out-door life on the dry inland plains of the colony. He follows your advice, goes on to a cattle or sheep station, or it may be into a surveyor's camp. You see and hear no more of him for some years, and then perhaps quite accidentally you meet him looking stout and well. He tells you that he quite recovered his health a few months after leaving Sydney, that he has lived in the country ever since, and has had no further trouble. But now let us suppose our patient, giving a precisely similar account of his failure of health and presenting the same physical signs, belongs not to the well-to-do classes, but to one of those whose maintenance depends entirely upon their own exertions. He is a clerk, a warehouseman, or an artisan, and without friends who can help him. You give him the same advice as you gave to the well-to-do patient, but he tells you that it is impossible for him to follow it, for there is no demand in the parts of the colony which you advise him to seek for people of his calling, and he cannot live without working. He is therefore of necessity compelled to remain in or near the metropolis, at first, perhaps, improving a little under cod-liver oil and tonics, but surely, if slowly, drifting into the second and third stages of the disease, with all chance of cure gone, and nothing before him but an early grave. This poor man, had he been able

to follow your advice, would doubtless have regained his health like his well-to-do brother, but poverty has spoiled him of his chance. This is the man and this the kind of case for whose benefit I desire to see a hospital established on the inland plains of this colony. For some years the need of such an institution has been borne in upon me. An able leading article in the *A. M. Gazette* of May 14th, 1894, with every word of which I agree, drew the attention of the profession to the urgency of the need; and more recently I drew public attention to the matter in the columns of the daily press. I there advocated the formation of what I called "farm hospitals"—buildings of the lightest and most inexpensive material, surrounded by a large area of land; cultivated by the patients, under the supervision of a skilled superintendent. The occupants would spend nearly all their time during the day in the open air, and sleep at night in thoroughly ventilated rooms. These patients, be it remembered, are not so ill as to be unable to do light work, such as is involved in the tending of sheep and in the cultivation of vegetables, fruit trees, and scent-plants, dairy-farming, bee-farming, poultry-farming, sericulture, and the like. Indeed, as we all know, light occupations carried on under favourable climatic conditions, by diverting the invalid's attention from himself, and preventing that self-concentration which is so harmful to us all, are positively beneficial. The expense of maintaining such a hospital would not be heavy, for the greater part of the work would, as I have just pointed out, be done by the patients themselves, and the produce of the farm would not only supply to a large extent the wants of the inmates, but also prove a source of revenue. I feel sanguine that in a few years the institution would become self-supporting. A medical superintendent would not be necessary, and thus a heavy item of expenditure avoided; a weekly visit from a medical practitioner from the nearest town would probably meet all the usual requirements. No patient would be admitted to the farm hospital unless certified to be suffering from consumption in its early and curable stage. Indeed, I would go further, and say that if any patient after residing on the farm for a time, showed signs of advancing disease—softening, &c.—he should be discharged. I am strongly of opinion that those who suffer from consumption in its early stage should be kept apart from those affected with it in the advanced stages. It must necessarily be that the lungs of the victims of tubercle in its early stage form a highly favourable soil for the implantation and growth of the bacilli exhaled and expectorated in the advanced tuberculous cases.

Such is a brief and imperfect sketch of my scheme. Some objections have been raised in the columns of the daily press. They resolve themselves chiefly into two (a) that this, like other eleemosynary institutions, would eventually become a burden upon the State; (b) that it would attract to our shores a very large number of consumptives, and so be a menace to the health of our people. In answer to the first objection, I would say that the proposed "hospital farm" would differ from other hospitals in this, that the patients would, by their labour, to a very large extent, if not entirely, defray the cost of maintenance. My reply to the second objection is that, as only selected cases would be admitted, the influx of advanced and incurable cases, which alone constitute the source of danger of propagating the disease, would soon cease. Moreover, if nature and not art has provided us with so great a boon as we possess in the climate of the inland plains, shall we act the selfish part and deny its benefits to all except those born within our own boundaries. I have a better

opinion of my countrymen than to think them capable of such action. Since I drew attention to the need of some such institution as I have described, a gentleman in this city has submitted to me a scheme for the treatment of both paying and non-paying patients, thus combining the philanthropic and the commercial elements. He would form a joint stock company, giving contributors of £500 the privilege of nominating one free patient to the benefits of the institution; contributors of £100 the privilege of nominating one patient, paying not less than 21s. per week, and ordinary shareholders of £10 the right of nominating patients who shall pay the full charges. As a commercial speculation, I think our population is too limited to make this proposal a success, even if paying patients would be content, which I very much doubt, to remain in the one locality for a lengthened period. My experience is that they prefer to move about from place to place, and indeed when it can be done this is desirable, as the locality which is most suitable for them in the summer is not the most suitable in winter. The principal objection, however, to this scheme is the inadvisability, as I have already pointed out, of crowding together patients suffering from consumption in its different stages. Now, gentlemen, I have done, and, in concluding, let me ask you in discussing the resolution which I have submitted to you to favour me with your views on two points especially—first, as to the advisability of establishing “farm hospitals,” and secondly, as to its practicability.

Dr. RENNIE seconded the resolution, and said he quite agreed with the remarks of Dr. Sydney Jones. Every medical man was continually coming across cases of consumption which, if they had been taken in hand in such a home as described by Dr. Sydney Jones, would have been much benefited, if not cured.

Dr. VAN SOMEREN said the question raised by the resolution moved by Dr. Sydney Jones was one which was worthy of the careful consideration of the members, and was of very great urgency, as every country practitioner knew how difficult it was to find a suitable place to send cases of the kind described.

Dr. SCOT SKIRVING said he quite agreed with the scheme propounded to make the patients work on the farm. The commercial scheme was not so good. With regard to the patients who were able to pay, they, of course, were able to make the necessary provision for themselves; the worst class of patient to deal with was the clerk or the governess, as it was generally very difficult to find any suitable occupation for such persons in the country districts. The labouring class had a very much better chance of obtaining employment in the country. He (Dr. Scot Skirving) heartily supported the resolution.

Dr. MEGGINSON said the purely commercial scheme would be difficult to work, and the idea of a self-supporting farm was not to be considered as being altogether a success, as the village settlements had been a failure. The irrigation villages of Mildura and Renmark were suitable, as far as the climate was concerned, and as the men could find suitable work at these places. There had been a suggested scheme of an irrigation village at Mulgoa; but, as the rainfall was about 40 inches at Mulgoa, there seemed to be no reason for irrigation at this place.

The PRESIDENT (Dr. Jenkins) said that all must agree that this resolution was one which should be passed, as the question was one of the difficulties to be met with in general practice. It would, perhaps, be better to adjourn the debate to some future date, to allow of a full discussion of the subject of dealing with curable cases of consumption. If, however, there were no other members desirous of discussing the resolution, he would put the question.

The resolution was carried unanimously.

Dr. COLPE described a new hæmostyptic-Panghwar-djambi.

Drs. FIASCHI and DIXSON discussed the subject.

Dr. FIASCHI read some notes on Santini's hydatid-resounding or booming as a diagnostic sign of multiple hydatid cysts.

SANTINI'S HYDATID RESOUNDING OR BOOMING AS A DIAGNOSTIC SIGN OF MULTIPLE HYDATID CYSTS.*

By THOS. FIASCHI, M.D., HON. SURGEON
SYDNEY HOSPITAL.

ANYTHING connected with hydatid cysts is of interest to Australian medical men. At the end of 1898 I noticed in an Italian newspaper a review of a monograph by Dr. Santini, “On Combined Auscultation and Percussion in Hydatid Cysts,” and gathered from it that on percussing a hydatid cyst whilst auscultating it with the stethoscope a special sound is heard. This is described as a sonorous booming (*rim-bombo sonoro*) of a low tone, brief, and ending in a rapid manner. To further illustrate it, the author compares it to the sound obtained on percussing a membrane stretched on a metallic frame. The sound is called by Santini “*sonorità idatigena*,” which I have translated in English as hydatid resounding or booming.

Since reading the above review I have searched for this sound in all cases of abdominal hydatids with which I have come across, and the result of my observation is that this special sound exists. The correctness of its description may be disputed. We all know how difficult it is to describe a sound in words, and how differently the same sound may appeal to the ear and imagination of various individuals; but I recognise as correct the similitude given by Santini as an illustration, and in the same way that I have been able to identify this sound by means of it, I think that you also will be able to do the same.

I consider this new sign a valuable addition to the semeiology of hydatid disease, and may be the means of preventing many useless exploratory incisions. As an example, I may quote to you a case of a large, smooth, elastic abdominal growth that came under my observation last year. It presented many of the appearances of a hydatid cyst, with the exception of the hydatid-resounding. All my attempts to obtain it failed. On making an exploratory incision, I found that the case was one of a large, soft sarcoma. Had I at that time had sufficient faith in the value of the absence of this sound as a negative proof of hydatida, the exploratory incision might have been avoided.

A further practical application of this sound that Santini does not mention, but obvious to anybody, is that it enables you to diagnose single from multiple cysts. In single cysts you get the hydatid-resounding uniform in tone, no matter on what point of the tumour you percuss. In multiple cysts, instead, as soon as you percuss on a point of the tumour not covering the cyst over which your stethoscope is pressed, you get a sound in all respects having the characters of hydatid-resounding, but different in tone from the one obtained by percussing the cyst over which your stethoscope is pressed. Thus, by percussing all over the area of the tumour, and changing the position of the stethoscope, you can judge, not only whether there is a single or a multiple cyst, but also the number of cysts composing the latter. As a practical example of this method, I may quote the case of a boy which came under my care three months ago. He presented a large globular swelling in the epigastrium, to the right of which were other two small swellings. To all appearances the swellings were due to a hydatid cyst. It was, however, a matter of doubt whether the cyst was single with some depressions in it, due partly to the round ligament, partly to adhesions, or multiple. No marked fluctuation was present, the walls of the cyst being very tense; and on pushing the cysts about they moved altogether, so that no definite information could be obtained. On auscultating the percussion sound, I got the hydatid-booming in all three of the projections, but when I tried to auscultate one cyst and percussed the other, I got a note similar to the booming, but quite different in tone from what I obtained when percussing and auscultating the same cyst. As this difference was constant over all of the three projections, I came to the conclusion that the cyst was multiple, and composed of no less than three cysts. On operating a few days after I found my surmise correct, for there were three cysts, with the addition of a fourth one on the convex surface of the liver.

Considering the great difference in the prognosis of a multiple from that of a single cyst, I think this application of Santini's hydatid-resounding worthy of notice, and I recommend it to you for study and further development.

Dr. SYDNEY JONES said he felt thankful to Dr. Fiaschi for bringing this matter forward. It was no doubt a very valuable sign of hydatid cyst.

Dr. FIASCHI said that there was a patient who had been in the Sydney Hospital with typhoid fever, but was now at the Walker Hospital, who had also hydatid. The patient would shortly be back at the Sydney Hospital for treatment for hydatid, and any member who was desirous of testing this sign would be able to do so then.

The PRESIDENT then called upon Dr. Van Someren to read his paper on "Typhoid fever—some points in management and etiology." Owing to the lateness of the hour, Dr. Van Someren went briefly over the principal points in the following paper.

TYPHOID FEVER: SOME POINTS IN MANAGEMENT AND ETIOLOGY.

By G. A. VAN SOMEREN, M.D. ED., OF ORANGE, NEW SOUTH WALES.

My excuse for approaching my professional brethren on the subject of enteric fever is not to be found in my being able to advance anything new, nor is it that my practice in this complaint has been attended with any measure of gratifying success, but merely that I have thought it would be instructive to make use of a late case I have had under my care for the purpose of emphasising a few points in the management and treatment of this disease, which, like the poor, is ever with us—if not as the disease, at any rate as the term. I desire to qualify myself in this way because I have often had the uneasy consciousness that I may have called many a case such simply because, to be candid, I scarcely knew what else to call it, and I cannot help suspecting that under this term, as precision in diagnosis advances, we shall find there exists more than one entity to which we will have to affix a title, elaborate a symptomatology, and specialise a treatment. But this only by the way.

The case I have referred to is that of a clergyman, the Revd. W. W., *et. 38*. He first came under observation in the first week of November, 1894, while I was in attendance on a son of his whose was a clear case of typhoid, and who had been ill for ten days or a fortnight before I saw him, and was then going through the phases of the disease, with the complication of some pneumonia. This boy and his brother (to be subsequently mentioned) had never been out of the town. The father, the patient in question, had been to Sydney, and was just returned. Before going there he had been rather unwell, but only vaguely and indefinitely so. He spent about a week there, and returned to find his boy ill, and with a severe headache himself, which steadily became worse, with anorexia. He first spoke to me about himself on the 5th, but on the evening of the 7th he was quite done up. His temperature was 103.8° F., pulse rapid and compressible, respiration but little quicker, barely febrile, tenderness in the right iliac fossa and along the course of colon (principally at the splenic flexure, and tongue furred and brownish at the back. Gurgling in the r. il. fossa, but no spots. At the same time another child, a younger boy, was complaining, and his temperature was

febrile. I had a consultation with Dr. Kalty, and with his concurrence the first boy was taken to the hospital, and the family moved out of the house to another, which they had contemplated taking, on the 8th. The younger boy I also put into the hospital. I will first dispose of these two boys. The one first affected did well, his temperature finally coming down on the 20th November. He had diarrhoea nearly all along. The younger boy had a very mild attack, soon getting quite well and strong.

A trained nurse was obtained from Sydney for the father on the 12th November, and in a motion passed after her arrival, on the administration of an enema, it was found that distinct traces of blood were present, and then it was elicited that this had occurred on a previous occasion. Constipation characterised the early stages of the case. The patient's mind was clear, and the headache quite left him by the 18th November. The abdominal pain and tenderness were marked, and a great source of complaint, while the tongue became very foul. No head symptoms occurred all through, with the exception of one occasion for a few hours, when there was some slight wandering. The patient was irritable and impatient, and anxious to prescribe for himself. On the 22nd November diarrhoea began, but it was not severe. On the 24th a severe rigor occurred, a slight one having occurred in the evening of the preceding day, but soon passed off. The temperature went up to 102° F. at 11 a.m. of the 24th; at 8 a.m. of the 25th it was 97° F. He now complained of his right leg, and it was found to be cedematous, and was flexed, the popliteal space being very tender. The cedema was only half-way up the calf of the leg.

On the 30th November a very severe stomatitis had developed, and interfered with the due administration of nourishment. By December 2nd the diarrhoea seemed to show a tendency to become more troublesome, and was very foetid. The temperature became normal by the 3rd, and continued so till the afternoon of the 18th, when another rigor occurred, and tenderness of the abdomen was marked, and temperature ran up to 102° F. However, the next morning it was normal again, and all tenderness was gone. A second rise took place a few days later, which lasted only a few hours, and since then all seems to have gone well up to date, January 5th. Such has been the course of this case, and a very few words will suffice as regards treatment. This consisted in the first instance of salol for a day or two, and then I began to give calomel in doses of one-third of a grain every four hours. This was continued with occasional intermissions from

the 14th till the 30th November. For the pain and tympanitis tinct. op. and spt. terebinth were given as ordered, while the stomatitis was treated by gargles of pot. chlor. and sod. chlorid. The diarrhoea was speedily checked by B. naphthol, and bismuth salicyl. Only once was quinine given, and then 3ss. in all in the course of two days, for the high temperature after the rigor. One point throughout the case which gave me great anxiety was the rapidity and compressibility of the pulse almost thready at times, while the action of the heart itself was rapid, the sounds being weak and running, and for this I exhibited hypodermic injections of strichnia, in doses of $\frac{1}{10}$ gr. from time to time. So much for the drug treatment. Once or twice I gave gr. ii. or iii. of calomel, while constipation existed, and on the occasion of the rigor and rise of temperature and tenderness on the 18th December, I gave iii. gr. calomel, which was followed by the gratifying fall of the next day, after a very copious motion, even after an enema had produced a formed stool.

In addition to the above measures, cold sponging was persisted in, ice was swallowed, and ice-bags were applied to the abdomen, as also cold cloths right round the body. The thrombosis and resultant cedema were dealt with by bandaging, and cold or hot applications, as seemed most grateful to the patient. Brandy was given pretty regularly in the middle stage of the case. The diet was milk, barley, rice water, and the patient took it or not, as he required, at first, but latterly by rule at stated hours, and in quantities which were specified.

Now, in this case, there are opportunities for illustrating certain points which I hope it will not be considered presumption on my part to seek to drive home. It is contended that medicine is not an art, and I fear the charge is one which can be substantiated. At the same time, if by art people would imply that the practice of medicine can ever be pursued by rule of thumb and routine, then I think we can safely say that those who so contend utterly mistake the whole nature of the subject, and would really reduce medical practice to a question of the treatment of disease, and not of the patient, and symptoms will fill the purview of the practitioner, and the *materies morbi* be quite overlooked. I am not one of those who join in the adoration of the Fetish Microbe (I hope my hearers will bear with my belated condition), which is because I know so little about the subject; but, at the same time, the processes connected with fevers and their cause, and to explain which the different bacilli are so skilfully adduced, are real and patent enough, and the

microbic theory constitutes an excellent working hypothesis, and holds the field, representing up to present that conception which the scientific mind forms of these processes and their etiology. For this reason I hope it will not be considered inconsistent if a heretic avails himself of the advantages accruing from a position and principles as to the full truth and efficacy of which he cannot persuade himself. I accept then the principle that underlying the disease which we call enteric fever there exists an etiological factor which, for the sake of precision and convenience, we will call a bacillus. Whether this be the *B. colicommunis*, altered in character and effects by certain external conditions, as contended by some, of a specific bacillus, I am not competent to enter into, still less give an opinion, but I consider that this entity, by the processes of its development in the midst of vital environment, produces a toxine to combat the destructive effects of which we have the whole processes of vitality in activity, with the result of the production of pyrexia, among other things. For my part, I subscribe to the conclusions of Metchnikoff in this respect, modified to the extent of believing that the toxines are what do the mischief, and thus we seem to find ourselves coming back to the old Humoral philosophy, so loftily scouted not many years ago. Is it not possible that there is a wealth of suggestive truth in the thought that, since all of these entities known as microbes seem only able to exist within certain ranges of temperatures, and those mainly lower ones, the pyrexia is really a reparative process, and not the disease, and hyperpyrexia the last despairing effort of the system overwhelmed and gone wild under the assault of a malignant, overpowering force? The thermotaxic centre of Macalister having been quite overbalanced by the virulence of the toxines, and both thermogenesis and thermolysis being out of gear. Such indeed have been the conclusions to which I feel myself driven by the reasonings of Macalister, Hale, White, and many others; and, under the dominance of such ideas, I have almost entirely ceased to combat pyrexia, especially in typhoid. The whirligig of time plays sad pranks with boasted progress of the human race, and has its ample revenges by bringing us back often to the place where our forefathers were left by us. How many a theory has been given up and scouted, only to be resuscitated in the course of time under different auspices, and with a differing terminology, and certain addenda, which are the accidents of their revival, and connected with the circumstances of such and the individuality of the re-discoverer! This seems accentuated by the way in which the recurrence to old pathologies

is often accompanied by a recourse to old treatments, and thus calomel, once hurled ignominiously from its pride of place, maintains its presence among us, as venesection seems also likely to do, notwithstanding the frowns and contempt of a proud profession, so that we find men like Sir W. Broadbent and Dr. H. Snow paying homage to its efficacy. I am sensible of how, constituted as we are, and apparently incapable of being lifted above those frailties of our being which we condemn, and rightly so, in the unlearned and unscientific, we are liable to allow the pendulum to swing back to the opposite side, and err as much in that direction, and be carried away by an ill-founded belief in the merits of a drug, and expect too much from it; but forewarned can surely be forearmed here. Though speaking thus, I do not wish it to be supposed that I consider calomel should be exhibited in every case of typhoid as a matter of routine, for surely it is no specific for the disease.

The point before me is that the pyrexia does not require treatment, save by cold water, while the *materies morbi* seems to be best dealt with by calomel, or some other intestinal antiseptic.

It is a most humiliating fact, and gives food for reflection, to note how fashion is as much a tyrant in the world of medicine as in any other circle of life, and this seems solely due to our not being really seized of the principles underlying the whole extent of our practice in medicine, which is tantamount to saying that we are like a ship without an anchor, and liable to be carried hither and thither by the ever-shifting currents of thought that cross and recross the ocean of truth.

But this is a digression, and one which I must crave pardon for inflicting upon you.

In regard to the occurrence of the stomatitis, of course this may be considered the outcome of the long persistence, viz., sixteen days, in the use of calomel. The question arises whether such small doses can be held accountable for it. Each of you will come to your own conclusion on the matter. My own impression is that it cannot be blamed, and the existence of it is a real complication.

The rise on the 18th December and subsequent fall seem to be proof of a re-accumulation and threatened activity of *materies morbi*, which was dispersed by the dose of calomel administered, and is a further proof of the value of that drug, which had not been renewed on account of the stomatitis.

The occurrence of thrombosis I have never met with before, and would like to know something of the frequency and nature of its existence in the experience of others. Fagge merely mentions its occurrence.

As regards the source from which individuals contract the disease, I would like to make a few remarks. I shall do my best to be brief. We have learnt to suspect water and milk; and, indeed, when we have an epidemic we can have very little difficulty in tracing our cases to some antecedent source of infection. But my difficulty consists in accounting for the sporadic cases which never cease to cross our path, and which may often be unaccountable, save on the ground that the general condition of the community differs at one time from that of another, so that the source of infection, being the same in both cases, only succeeds in the one case in affecting certain susceptible individuals, while it fails altogether in impressing the community as a whole, while at another we have an epidemic. But this is certainly no explanation for what is implied by that condition of the community which is so effectual in resisting the onset.

In this case under consideration we have absolutely only one household attacked, and only three members of that (all the males) out of a total number of seven, the other four being the mother and three daughters, all children. No other case occurred in Orange, which has a water supply of unexceptionable quality. There have been two other cases, but both were imported and in the hospital.

In East Orange, where no water is laid on, and the water supply is thus derived from wells (principally surface water wells) and tanks filled from rainfalls, there have been two cases, of one of which there can be no doubt, while the other seems to have been a mild one. But these cases were in two separate households, and neither had any communication whatever with my cases. In regard to milk supply, my patient was supplied by an East Orange milk-vendor, who supplies a large number of residents in both municipalities, and this family was the only one of those supplied by her which had the disease. Neither of the families in East Orange was supplied by her. The family in my case drew their water from the town supply, and had done so ever since their arrival in Orange, some eight or nine months ago. It seems that we can thus eliminate both milk and water as etiological factors in these cases. As regards the house itself in which they resided, it was one of the oldest in town, and hitherto had an unblemished record, none of the previous inhabitants having suffered in any way from fever. The patient had resided in it for two months, and at the time of going into it the cesspit had been filled up with lime and fresh earth, though the contents, which were the accumulation of about seven months, had not been removed before the pit was filled in. The

patient stated that the effluvia during the operation was very offensive, and affected him very much in an unpleasant way. Drainage was practically in a state of nature; the ground rose slightly behind the house, so all water ran towards it. My patient had also done a little digging over the site of what was once a cow-byre. Such are the facts I have been able to gather in regard to the environments of my patient, and I fear they do not throw any light upon the subsequent course of events. It would seem then that there may be some factor other than what has been hitherto suspected in such cases, for I believe I may say that my experience is that of hundreds of others.

In 1890, up to July, typhoid had been exceedingly prevalent, and of a fatal type, in both parts of Orange. In that year the water was laid on to Orange proper, after July, and since that date we have had very little or no typhoid; imported cases forming no small percentage of what have occurred. It cannot be claimed that the laying on of the water can altogether account for this, since East Orange has shared in the immunity of the sister town, and it has refused to take the water. Here were the elements for pointing an admirable object lesson, but the demonstration has hitherto not come off. I adduce these particulars, not so much to call in question the decision as to enteric fever being water-borne, as to draw the conclusion that there is a factor, hitherto undiscovered, which affects the incidence of the disease in our midst, and it would seem that till this is brought to light and guarded against, we shall never be in a position of safety as to the possible occurrence of the disease at any time or place.

It is interesting to note a remark of Dr. Creighton's, extracted from his work on epidemics, where he says, "While the more or less steady or endemic prevalence of typhoid fever is due to the formation and reproduction in the soil of an infective principle (probably of faecal origin) which affects more or less sporadically the individuals living thereon, after the manner of a miasma rising from the ground, there have been some hardly disputable instances of the infection being conveyed to many at once from a single source in the drinking water and by the medium of milk. But such instances, suggestive though they be, and easy of apprehension by the laity, must not be understood as giving the rule for the bulk of enteric fever. In like manner, the escape or reflux of excremental gases, &c., do not supersede the more comprehensive and cognate explanation of enteric fever as an infection having its habitat in the soil, and an incidence upon individuals, after the manner of other

miasmatic infections." This seems to me to be as far as we have got, and this whole question of the etiology of sporadic cases is one which has been prominent in Orange, as we have had 20 cases in six months, and Ashburton Thompson's report exonerates milk and water, and we are positively left to the solution of sub-soil pollution.

Dr. CHENHALL asked how often the calomel was given in the twenty-four hours.

Dr. VAN SOMEREN said the calomel was given every four hours.

Dr. QUAIFF asked what were the sanitary conditions of Orange at the present time.

Dr. VAN SOMEREN stated that the system of earth closets was in vogue at Orange.

Dr. SCHRAEDER said that his experience of the use of calomel in cases of typhoid had not been marked with any very great degree of success.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE Council met at Dr. Jenkins' residence on Friday 2nd August. Present—Drs. Jenkins, Crago, Clubbe, Coutie, Faithfull, Quaife, Worrall, Chisholm, Knaggs, Scot Skirving.

Apologies were received from Drs. Sydney Jones, Thring, and Fiaschi for non-attendance.

The minutes of the previous meeting were read and confirmed.

The PRESIDENT stated that since the last meeting of the Council the Branch had sustained a very great loss by the death of the late Dr. Huxtable.

Dr. SCOT SKIRVING moved,—“That an enlarged photograph of the late Dr. L. R. Huxtable be added to list of photographs of ex-presidents.”—Carried.

Dr. CRAGO moved, and Dr. QUAIFF seconded,—“The Council of the New South Wales Branch of the British Medical Association desires to place on record an expression of their appreciation of the valuable services rendered to the Branch by the late Dr. L. R. Huxtable, and of their deep sense of the loss that the Branch and the profession of the colony has suffered by his untimely death. To his energetic and devoted services as Councillor and Hon. Secretary are due, in a great measure, the initiation of our library, the acquisition of the *A. M. Gazette* as the property of the Branch—a step which has brought about the practical federation of the whole of the Australian Branches of the B.M.A., and an enormous increase in the roll of membership of the Branch. The members of the Council feel that they have lost a friend and colleague, whose place it will be very difficult to fill.”

2. “That a copy of the foregoing resolution be forwarded to Mrs. Huxtable, together with a letter from the President, expressing the deep sympathy of the Council with her in her sad bereavement.”

Carried.

The following letter was received from the hon. secretaries of the Western Medical Association.

Resolved, “that the letter be acknowledged, and a copy forwarded to Mrs. Huxtable.”

Petersham, August 2, 1895.

Sir,—We desire on behalf of the members of the Western Medical Association to express their deep regret at the untimely death of Dr. Huxtable, the late

hon. sec. of the New South Wales Branch of the British Medical Association.

The members of the Western Medical Association feel that the New South Wales Branch of the British Medical Association has lost a most able, energetic, and faithful officer, and they realise also that the work done by Dr. Huxtable during the tenure of his office was of immense service to the profession generally. They, therefore, cannot refrain from expressing their sincere sympathy for the loss of one so useful and so courteous as the late honorary secretary was.

We are, yours faithfully,

W. H. COUTIE, { Joint Hon. Secs.
G. H. ABBOTT, } Western Medical Association.

Dr. Jenkins, the President N. S. W.

Branch British Medical Association.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY meeting held at the Adelaide Hospital, 25th July, 1895. Present—The President (Dr. T. K. Hamilton), Drs. Watson, Poulton, London, J. C. Verco, Giles, J. A. G. Hamilton, Perks, Todd, A. A. Hamilton, Marten, Stirling, C. Magarey, Robertson, W. A. Verco, Harold, Fischer, Symons, Hone, Irwin, and Dr. Swift (hon. sec).

Dr. J. H. Hamilton showed a case of pulsating exophthalmos.

Dr. LONDON showed a girl, aged eight years, upon whom he had performed “craniectomy” twice for microcephalus. Five inch trephine holes were made, and the intervening portions removed with bone forceps, so as to make a longitudinal gutter on each side of the middle line. A month was allowed to elapse between the operations. Details will be published later on.

Dr. GILES showed a man with a wide cleft palate; also, a man *æt.* 19 with remarkable deformity, which was probably due to ultra-uterine pressure.

Dr. POULTON showed a lower extremity removed at the hips for a rapidly-growing sarcoma of the vastus externus muscle.

Dr. LONDON showed (by kind permission of Dr. Jay) some viscid fluid of a yellow ochrey colour, removed through a moderate-sized aspirator needle in the course of an operation for hydatid of the liver. To his surprise, on subsequent examination, the fluid turned out to be laminated hydatid membrane, very much degenerated, as could easily be demonstrated by agitating a portion with water. This case throws light upon some reported instances of absence of the mother cyst. The hydatid had been cured by aspiration twenty years previously.

Dr. J. C. VERCO showed a bottle of hydatid cysts. The patient was a woman, aged 40, who consulted a medical man 17 years ago for a lump the size of a marble on the upper and outer aspect of the right thigh. He told her it was in the muscle. Two years and a-half ago (up to which time it had not grown very much) it got rapidly larger, very painful, and throbbing, and she consulted a medical man, who aspirated it, and told her it was a sarcoma growing from the bone, and must be removed, and might possibly necessitate removal of the leg. This alarmed her, so she saw another doctor, who thought it non-malignant, and with rest in bed the inflammation subsided, and the pain disappeared. It then only became uncomfortable from its size, her inability to lie on it, and pain caused by knocking it. When seen by Dr. Verco, a few days before operation, it was as large as the fist, and lobulated

simulating very closely a fatty tumour, but two of the lobules were rather too soft for a lipoma. On incision, great numbers of hydatids were evacuated, from the size of a large walnut downwards, very many of them quite clear, and apparently living, others opaque, yellowish, and collapsed, mixed with much yellow puriform fluid. No mother cyst was found. The adventitious capsule was distinct, of the colour of wet chamois-leather, and alveolo-reticulated, like the surface of the pericardium in pericarditis, evidently a pyogenic membrane. It was situated in the subcutaneous tissue, outside the deep fascia of the limb. The points of interest were: 1. The long duration of the tumour, seventeen years. 2. The duration of a suppurating hydatid, two years and a-half (there was no sign of inflammation when the operation was undertaken). 3. The difficulty of diagnosis. First it was a muscular tumour; then, when inflamed, a sarcoma springing from the bone; then a lipoma. Even aspiration did not clear it up. Probably only a small daughter cyst was punctured. 4. The existence of, apparently, living hydatids in pus for two years and a-half.

Dr. LONDON read the notes of a case* of pernicious anemia in a coach-painter, who had suffered from chronic lead-poisoning and hæmatemesis, and who was completely cured by marrow after the ordinary drugs had failed. Also notes of two cases of chronic plumbism, which derived great benefit from feeding with bone-marrow.

Dr. VERCO thought none of the three cases could be properly regarded as coming under the term pernicious anemia. The first suffered from plumbism, and had also had three severe attacks of hæmatemesis, and as gastric ulcer was commonly found in middle-aged men as well as young women, and as two previous medical men had found a hardness in the epigastrium suggestive of gastric cancer, it was quite possible the man had a gastric ulcer. He did not think anemia should be regarded as pernicious, when such a sufficient cause as hæmorrhage was in evidence to explain it. So, also, in the second case there was first saturnism; and second, pronounced albumenuria from nephritis, which fully explained the anæmic condition. The third one was an anemia associated with plumbism. He thought they ought scarcely to be regarded as anemia from plumbism either, seeing that the first patient had also hæmatemesis, and the second one had syphilis and chronic nephritis. Both were complex cases. Still, while unwilling to accept them as instances of either pernicious or saturnine anemia, the history of the cases was not only interesting, but instructive, and the Branch was indebted to Dr. Lendon for impressing the value of marrow as a therapeutic agent in cases of protracted and severe anemia, and indicating a method of treatment which might be adopted in such cases when arising from any, and even from many causes.

Minutes were taken as read, on the motion of Dr. LONDON, seconded by Dr. STIRLING.

Ballot for Drs. Shuter and Watson.—Elected.

Dr. C. MAGAREY read his paper.

Dr. STIRLING read his paper, which will be found on page 314.

Briefly discussed by Drs. Verco, Poulton, Lendon, and the President. It was generally considered that the paper was extremely interesting and instructive, but that it required to be perused carefully before it could be discussed or criticised, and, as the Council had already decided to set apart an evening to the subject

of hydatids, it was decided, with the consent of the author, to postpone the discussion until then.

"LUXATIO ERECTA" OF SHOULDER-JOINT.

By C. MAGAREY, M.B., CH.B., ADELAIDE.

THIS dislocation which I describe below is, I fear, more interesting in view of its rarity than from any instructiveness its recital may possess. It is mentioned by Hulke in "Holmes' System of Surgery," and is called by him "luxatio erecta." It is anatomically the only true subglenoid form of dislocation of the shoulder.

Hulke quotes two cases, and says:—"In both the arm was strongly abducted and raised. The elevation was so great that one patient, a sailor, supported the arm by grasping the upper end of a short stick above the level of his vertex, the other end being stuck in the waist-band of his trousers." He says: "The caput humeri could in both cases be plainly felt low in the axilla. The axis of the shaft of the humerus was directed upwards and laterally outwards from the trunk."

My patient was a very stout German charwoman. She was lying on the bed on her back, with the left arm raised and slightly abducted, the hand being higher than the head. In fact, in a somewhat similar position that a woman's arm takes when endeavouring to throw a stone, but with the difference that my patient's elbow-joint was nearly fully extended.

She screamed with the pain, complaining of cramps in the arm generally and tingling of the fingers. The angular appearance of the shoulder, and the abnormal prominence of the acromion, with the depression below it, were all well-marked, and left no doubt as to the dislocation; but, owing to the obesity of the woman and her intolerance of the pain, the exact position of the head of the humerus could not be accurately determined.

The accident was caused by the patient wrestling with her husband. With the fingers interlocked, the two clasped hands, which were then raised nearly above their heads, the endeavour then being, by a violent extension of the other's hand on the wrist backwards, to force the one inferior in strength on to the knees on the ground. The woman during this struggle felt a sudden violent pain in the shoulder, and was subsequently unable to depress the arm again.

Attempts at reduction of the dislocation by manipulation failed, owing to the muscular resistance, but the head of the bone was easily replaced by extension with the heel in the axilla.

*Published in the form of a clinical lecture in the *Intercolonial Quarterly Journal of Medicine and Surgery*, August, 1896.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting was held in the rooms of the Austral Salon on Wednesday, July 31st, at 8 p.m. Present: The President (Dr. Snowball), in the chair; Drs. A. Black, Kent-Hughes, Hamilton Russell, Ritchie, Cuning, Kenny, Steel, Rankin, Springthorpe, McAdam, and Meyer.

The Hon. Sec. (Dr. Mullen) regretted his inability to be present, owing to illness.

The minutes of the previous meeting were read and confirmed.

The election was announced of Drs. T. O'Shanassy, of Heywood, and J. H. Tymms, of the Melbourne Hospital, as members of the Branch.

Regretful reference was made to the death of an old honorary member, the late Mr. T. R. Wilson, and to the retirement of one of the earliest members, Dr. Talbot, of Brunswick.

EXHIBITS.

Dr. L. Kenny exhibited a well-marked case of persistent pupillary membrane.

RARE CASE OF COMPLETE PERSISTENT PUPILLARY MEMBRANE IN BOTH EYES.

By A. L. KENNY, M.B., B.S., HON. SURGEON FOR DISEASES EYE, EAR, NOSE, AND THROAT, ST. VINCENT'S HOSPITAL, MELBOURNE.

MISS C. O. *æt.* 15, consulted me on the 23rd May, 1895, complaining of defective vision. "Has always had near sight;" had "sore eyes" in June, 1894; typhoid fever three years ago.

R. V. = $\frac{5}{8}$; J₁₀ at 23cm.

L. V. = $\frac{5}{8}$ 11, J₁ at 27cm.

Nasal catarrh, with scar below right naris (? specific); specific type of face; teeth non-specific.

Persistent pupillary membrane complete in both eyes, very like the geometrical spider's web, but more complete at centre. Not adherent to anterior capsula of lens; fibres of attachment to anterior surface of iris, not to pupil margin. Extensive specific chorio-retinitis, very old; much pigment around the atrophic patches, which are small, and oval or triangular in shape.

Old otorrhœa; much dry cerumen now in meati auditorii.

Father intemperate, bad health, separated from mother. Mother married *æt.* 18; first child premature, died; second child, patient.

No other details of history can be obtained. Patient brought by an aunt, who knows nothing further; and I believe both parents are dead.

Cases of filamentary shreds and of capsulo-pupillary membranes (the latter *adherent* to the anterior surface of the lens capsule) are fairly frequently met with in eye work, but I have not yet been able to find a record of a case similar to the present, in which the membrane is attached

only by numerous radiating filaments to the iris, and non-adherent elsewhere—this condition existing in both eyes. The pupillary membrane is a foetal structure which usually disappears about the seventh month of foetal life (Cloquet), but may persist until a month after birth. It is interesting to note in this case the existence of an inherited syphilitic inflammation of the choroid and retina of old history, possibly intra-uterine. May this not have so interfered with the normal foetal changes as to have led to the persistence of these membranes?

It is only in cases of posterior synechia or adhesions between the iris and the lens capsule, the result of iritis, that any difficulty could arise in the diagnosis. In these cases the adhesions start from the pupil margin, whilst in the case of persistent pupillary membranes the bands come from the anterior surface of the iris, some distance from the pupil, at a part called the corona.

The iris and ciliary body are developed from an epiblastic and mesoblastic portion. When the mesoblastic portion is first forming it pushes out beyond the epiblastic, and rests upon the lens. It becomes thinner after a time, and later nothing is left but the endothelial layer and a few spindle cells from the anterior layer, which accompany vessels. The spindle cells extend only a short distance into the pupillary membrane, and in its central portion the membrane consists only of a single layer of capillaries (Holden). Kölliker states that before the development of the iris the pupillary membrane is the anterior wall of the capsulo-pupillary membrane, which surrounds the lens as a vascular pouch, and is closely applied to its whole surface, and is thus pressed against the cornea; hence persistent capsulo-pupillary membrane in some cases.

I have made several unsuccessful attempts to photograph the membranes in the present case, but I hope to be able to have coloured sketches made.

Patient shewn at meeting and examined by members.

Dr. Rankin exhibited a collection of hydatid cysts, said to have been passed per urethram, without any signs of disease in kidney or bladder, and apparently from the bladder only.

Dr. H. Russell ventured the opinion that they had come on from the kidney, and quoted a case in which he had reason to think similar cysts had passed through the bile-duct, a much smaller tube, into the intestine.

Dr. Springthorpe exhibited the patient with post-influenzal tubercular ulcer of the pharynx, which had been cured by tuberculin, and shown before the Society some twelve months ago. The scar remained firm and entire. He also showed a growth on gelatine of a bacillus taken from a preparation of milk advertised as sterilised.

Dr. MEYER then read his paper on "Further Notes

on a Recent Abdominal Case," prefacing his remarks by re-reading the account of the case from the *A. M. Gazette*.

FURTHER NOTES ON A RECENT ABDOMINAL SECTION.

By FELIX MEYER, M.B., B.S., HON. SURGEON WOMEN'S HOSPITAL, MELBOURNE.

AMONG the cases which I brought under the notice of the members of the Branch at the May meeting was one of pregnancy complicating a fibroma of the uterus, for which I did an abdominal section on the 5th April last. In reading the notes of this case* I said, "I really thought I was dealing with a growth separate from the uterus. Certainly the acute pain and febrile symptoms ceased after the operation. It is quite possible that she may be delivered at full term without excessive hæmorrhage, or the necessity of a Porro, for which nevertheless I shall be prepared. It is also probable that the myoma will undergo fatty degeneration along with the involution of the uterus generally." From the date of the reading of the above note till the 27th June (just a month) the patient made steady progress, the pulse keeping at 80 to 90, and the temperature normal, or sub-normal. Late in the evening of the 29th June, without any warning, and while in bed with a fire in the room, she was seized with a violent rigor, lasting nearly half-an-hour. The pulse ran to 162, and the temperature to 102°. This was her condition when I saw her, and I must confess it rather alarmed me. I gave her a mixture containing liq. opii sed. (Battby) mxx. with some ether, to be repeated every four hours; and, having discovered no signs of labour, decided to wait a few hours. She had a restless night, but was decidedly better in the morning.

At 8 o'clock that afternoon, 28th June, labour came on, and at half-past six the same evening I delivered her of a seven months male child, which needed just a turn of forceps to complete delivery, the uterine action being rather weak.

The placenta soon followed without difficulty, and there was very little hæmorrhage. The child was very feeble, and sank about 12 hours after.

The uterus remained large, and at the present time—nearly five weeks after delivery—is still so; that is to say, it is a fibroid uterus with the hard boss on the right cornu originally felt. I have not yet passed a sound to ascertain the depth (which, I should say, is between 3½ and 4 inches) on account of the tendency to hæmorrhage. The patient goes about now, has gained weight and strength, and feels well. There is no hæmorrhage in the true sense of the term, but a slight show of blood

daily. She is taking a mixture of por. chlor. and ergot, and the next three months should decide whether a salpingo-oophorectomy be or be not necessary.

The paper and Dr. Meyer's further remarks were listened to with interest.

Dr. Springthorpe then read his paper, "Notes on Two Cases of Infection."

NOTES ON TWO CASES OF INFECTION.

By J. W. SPRINGTHORPE, M.A., M.D. MELB., M.R.C.P. LOND., PHYSICIAN TO THE MELBOURNE HOSPITAL, LECTURER ON THERAPEUTICS, ETC., TO THE MELBOURNE UNIVERSITY.

I. J. S., aged 29, admitted to the hospital 20th March, 1895. Ten days before he had injured his finger. During the next five days there was pain and swelling up the right arm, followed by high fever, shivers, sweating, cough, pain in the right side of the chest, and increasing dyspnoea, with thick viscid sputum. Examination disclosed an abrasion on the back of the right middle finger, surrounded by redness and swelling, with swelling and tenderness in the forearm, and a tender corded vein along the inner side of the upper arm; T. 102·6°, pulse 120, respirations 42; tongue coated and dry; pain in the lower part of the chest, and rough bronchial breathing over the right lung, with coarse friction sounds and laboured breathing. Next morning patient was worse. There was swelling over the root of the neck and the upper sternum, with some boggy feeling under the clavicle. Patient was cyanosed. Temperature varied between 104° and 102°, and the tongue was dry-brown. The following day the dyspnoea increased, and crepitations were audible in the lower part of the lung. T. 104·6° and 101·8°, with profuse sweats, and severe pain in the left chest. Death occurred next morning. The *post-mortem* showed cellulitis of the right arm, secondary to poisoned end of finger, with septic abscesses in the lungs, and patches of necrosis in the liver.

II. Nurse P., aged 24; admitted into ward xii. on the 17th May, 1895, complaining of pains in the right arm, neck, and right shoulder joint (and, to a less extent, in the left also), following an influenzal cold, with a chilly feeling yesterday, and free perspiration last night; T. 102·2°, respirations 16, pulse 120, soft, regular; heart and lungs normal. That evening the temperature rose to 105·2°, and remained all the next day between 102° and 104·8° (despite repeated doses of quinine and antipyrine), with pulse 108-132, and respirations 38-48. There was no sore throat, no coryza, no epistaxis, no cough, no pain in chest or abdomen, no diarrhoea, appetite fair, but some nausea and vomiting, and the shoulder-pain less. Enquiry then disclosed that on the 13th May she had run the point of her scissors into the right palm, near the end of the index finger. Despite pain in the part, she continued her duties, handling foul dressings, etc. The pain extended up the outer side of the forearm to the elbow, and on to the axilla, where on the 16th she noticed a small lump, with some hot and cold feelings; temp. 103·8°, and inability to raise the arm. She had told nobody, and, thinking it was influenza, had continued her duties. On examination there was still some pain on the back of the right hand, up the forearm, and in the axilla, with a small enlarged gland in the right side of the neck, and some puffiness above the clavicle and up the neck. The subsequent course of events up to her death on the 27th may

* *Australasian Medical Gazette*, June, 1896, p. 249.

be summarised as follows:—The pain left the hand, forearm, arm and shoulder in that order, so that by the 22nd movement was easy and painless. The pain and tenderness, however, with swelling, invaded the right side of the neck, the right scapula, the right infra-clavicular region, the upper sternum, the left infra-clavicular region, the left lower neck, the right sub-maxillary region, the right side of chest and abdomen, the right calf, and the right groin in the order named. It was most noticeable in the region of the right neck and the upper sternum (as low almost as the nipples). By the 25th there was some oedema in dependent parts of the right leg, and pitting laterally down to the crest of the ilium. At first about the neck and sternum it was simple puffiness, with a quasi-emphysematous crackle. This temporarily invaded the upper neck on the right side, and even the right side of the face, with, on the 19th, some dysphagia from swelling of the right sub-maxillary gland. By the 21st the oedema began to solidify. Next day it was almost brawny above the right clavicle and half way down to the nipple, with a similar but less marked condition above and below the left clavicle. On the 25th free incisions were made below both clavicles. There was no tension, and only a very little dark sanious discharge flowed. Except on the 22nd, the temperature was daily above 104°, and never below 101°; the pulse 120 to 168, and the respirations almost always above 40, and after the 20th above 50, in the evenings. For some 40 hours before death they were over 60 per minute. The lungs, however, were clear until the 21st, when there was some dullness over the right lung posteriorly, apparently due to sub-cutaneous oedema. Even on the 22nd the lung sounds were fairly normal. On the 25th there were signs of implication of both lungs in expiratory rhonchus and broncho-vesicular breathing, with suspicion of moist sounds, and for the first time the face became dusky. This implication, however, instead of spreading, cleared up slightly before death. Throughout there was no delirium or stupor until towards the end. A very large quantity of both nourishment and stimulant was freely taken, and apparently digested. There was no cough or sputum, and the tongue was clean and moist up to the last few days. The bowels were freely opened daily, and the urine was plentiful, strongly acid, sp. gr. 1011, cloudy on boiling, but free from albumen and sugar. On the 21st and 22nd there was a temporary lull in the downward progress. Thenceforwards patient gradually grew progressively worse. Therapeutically, patient was given quinine in gr. v. doses every four hours, with larger doses of gr. xx. at intervals, and gr. xv. doses of antipyrine in the evenings (continued, as it alone seemed to act as a general sedative). Neither sponging or packing had any persistent effect on the temperature. After the incisions had been made into the oedema, pot. permang. solution was injected freely into the oedematous tissues, and as soon as the lung became implicated oxygen inhalations were freely administered. The former had no noticeable effect, but the latter improved the breathing and the general condition, and may perhaps be credited with arresting further extension through the bronchial and pulmonary glands. Poultices, however, were then used with ammon. carb. gr. v. and tinct. strophanth. m. iii. every two hours.

I append a two-hourly chart, containing detailed information.

BACTERIOLOGICAL EXAMINATION.

Dr. Cherry kindly examined bacteriologically specimens of the organs in the first case, and isolated therefrom the bacillus pyocyaneus and the staphylococcus

pyogenes aureus. The former occurs in pus under favourable conditions, producing a bluish-green discolouration. The latter cocci are very frequently found in earth as well as in pus, and may enter even through the unbroken surface. Inflammation and suppuration almost immediately follow their invasion, and in isolated instances they are found in the blood. When pyæmia supervenes they are present in the metastases, producing even necrosis when multiplication is very rapid. This is what apparently occurred in the liver in the present case.

In the second case, Dr. Mollison examined the blood, and found it sterile. Cover-glass preparations, however, from the incised oedema disclosed plenty of cocci when stained by Weigert's modification of Gram's method. These cocci were about the usual size, not arranged in rows or clusters, and without any microscopical characters of an identifying nature. It was interesting to note that they were entirely apart from the blood cells. Another portion of the effusion was removed in a sterilized pipette, and sown in gelatin broth. The germ was undoubtedly anaerobic, and produced gas bubbles freely some distance from the surface within 36 hours at 97°, without any other growth. Unfortunately, the flask was accidentally overturned by myself, and M. de Bavay, who was making the investigation, found all subsequent attempts at cultivation futile.

REMARKS.—No clinical account of infection is now complete without its bacteriological supplement, and hospital physicians should always, in my opinion, if possible, make an effort to trace connection, if not cause and effect, in all such cases. It may be true that the account may for one reason or another be inconclusive, and there may seem to have been no present therapeutic advantage; still, it is only from such record and attempts that the satisfactory results of the future will be accomplished. I have already shown in papers before the Branch how such microscopic and bacteriological examination of the blood and fluids is of value in diagnosing influenza from allied symptoms of different origin, and in saving a case of anthrax which might otherwise have been allowed to assume fatal proportions. It was by a similar examination also that I was able (*vide Australian Medical Journal*, November, 1894) to show the micrococcus tetragonus might, under certain conditions, be pathogenic to human beings, and that under the generic name of typhoid fever were at present often included the symptoms associated with the presence of at least three different germs a bacillus (first described by M. de Bavay), and also the bacillus malig-oedem., as well as the better-recognised bacillus of Eberth (*vide Australian Medical Journal*, June 20th, 1894). In the present cases there is, unfortunately, nothing new to relate. The case of septic pneumonia following a local injury is characteristic of a fairly large class and the two organisms present are ones which are well known in such connection. The second case was a peculiarly sad one. The patient herself came under observation for influenzal rheumatism. It was early evident, however, that she was suffering from an uncommon form of blood-poisoning. From the course of events, I concluded that invasion had been through the lymphatics, and not through the blood, and we found the blood sterile. Careful observation also showed that there was probably gas being given off even before there was marked exsmosis. The diagnosis was therefore ventured of a gas-producing germ spreading through the lymphatics. Invasion could actually be traced in order through the different chains of glands. There being no certainty as to the special germ, and no antidote known, reliance had to be placed upon

maintaining the natural resisting power, and facilitating excretion. In addition, a crude attempt was made to treat the germ locally by the continued administration of large doses of quinine, by local injections of pot. permang., and by oxygen inhalations. It is, of course, impossible to be certain, but I am inclined to believe that the latter checked the advance of the disease in the direction of the intra-thoracic glands. It is not, however, from this direction, or even, as we perhaps wildly thought, by attempting to deal with the lymphatics directly, that relief and cure are to be expected. As with the diphtheria anti-toxin, the question seems to be one of bacteriological chemistry, and the specific antidote must be sought amongst the extracts, or reaction products of the growth of the germ concerned. I admit with regret that nothing we could do was successful in rescuing either of my present patients; but, I feel convinced that the experience thus and similarly gained will before long lead to the prompt identification of the cause in a given case, and to the almost equally prompt administration of the antidote, and that along these lines lies the way to successful treatment. As I ventured to say in a recent paper on the diphtheria anti-toxin, what we want, and want badly, at the present time are the anti-toxins (if they exist, as we may fairly assume they do) to these pyococci, and it is gratifying to note in a recent British Medical Journal that bacteriologists are already promising us something in that direction.

Dr. HAMILTON RUSSELL had listened with great interest, especially to the concluding suggestive remarks. He had under observation a case in which a large spore-bearing bacillus had been found by Dr. Cherry in the secretion from a (erysipelatous) condition which had unaccountably supervened after the healing of a compound fracture of the leg. Bacteriology would settle many problems otherwise insoluble.

Dr. KENNY gathered from the chart that the quinine had acted better than antipyrine as an antipyretic, confirming his own experience.

Dr. MEYER trusted bacteriology would settle several difficult questions as to the different kinds of puerperal fever, as it seemed to be doing in typhoid fever. He very much questioned the value of antipyretics as a general rule.

Dr. SPRINGTHORPE thanked members. He had little to add to the paper. The case bore out his experience (gained from over 100 cases of fever) of the great value of the sterilized malt extract brought forward by M. de Bavay and himself in pyrexial conditions. Its superiority to milk might now be accepted as a fact, and he hoped members generally would give it a trial. As regards antipyretics, the coal-tar series, at any rate, seemed to act simply symptomatically and not preventatively, and their usefulness was certainly much more limited than was generally supposed.

The meeting then adjourned.

THE following notes were read by Dr. Officer at the last meeting of the Branch:—

DISLOCATION OF TIBIA BACKWARDS, WITH RUPTURE OF THE POPLITEAL VESSELS—AMPUTATION.

Edward Roberts, *et.* 26, admitted 6th April, 1895. Patient was sliding on a waterslide with some companions, and when his right leg and thigh were stretched out in front of him a companion fell with all his weight on to the front of his tibia. He says he felt something go, and he could not use his leg at all. He

was brought up to hospital, and then there was a good deal of swelling in the limb from the knee upwards, and great effusion into the knee-joint. There was no marked shortening, and, under chloroform, the knee was bent, and an attempt made to reduce the dislocation by extension, since no crepitus could be detected Patient had been drinking. Put up in a MacIntyre splint; leeches, *xx*.

April 7th, 1895.—Leg greatly swollen since last night, and the swelling now extends up the thigh; the foot is cold, and no dorsalis pedis pulse could be felt, so a consultation was called, and it was decided to cut down and examine the condition. Under chloroform, Mr. Ryan made a long incision down over the popliteal space, and immediately a large quantity of semi-fluid blood exuded. In the middle of a large mass of blood the popliteal artery and vein were found completely severed. A large amount of blood was found extravasated in the tissues of the thigh, and a complete backward dislocation of the tibia. Amputation was performed at the junction of the lower and middle thirds of the thigh in the usual way. On a more careful examination of the knee-joint, there was found a complete rupture of all the ligaments of the knee, except part of the anterior ligament and the ligamentum patellae. There was great extravasation of blood into the knee-joint, and the periosteum was stripped off the posterior part of the condyles of the femur and the lower part of the shaft. A microscopical examination of the artery revealed no arteriosclerosis.

PROCEEDINGS OF OTHER SOCIETIES.

MELBOURNE MEDICAL ASSOCIATION.

THE annual meeting of this Association was held on Friday, 2nd inst., at the Association's rooms, in the Stock Exchange Club, Collins-street. A very large number of members were present. The following office-bearers were elected for the current year:—President, Dr. C. P. Dyring; vice-presidents, Drs. C. H. Molloy and P. B. Bennie; committee, Drs. A. V. Anderson, S. S. Argyle, W. R. Boyd, J. W. Springthorpe, G. A. Syme; hon. secretaries, Drs. Chas. Goodall and F. J. Owen; hon. treasurer, Dr. B. R. Stawell; hon. steward, Dr. H. A. Embling; hon. auditors, Drs. J. A. Thomson and A. J. Wood.

The committee reported an extremely satisfactory year of original and important work by members, a sound financial position, and a prospect of continued success.

The retiring President, Dr. E. W. Anderson, read his address on

"RECENT ADVANCES IN MEDICINE AND SURGERY."

Gentlemen,—I have to thank the committee, our hon. secretary, and the members generally for their invaluable support and assistance during my term of office. Of course it is a source of regret that our numbers have not increased during the year, but I believe all medical societies have had this experience of late, owing to the stringency of the times and the scattering of our graduates far and wide; but I can affirm positively that a great deal of honest, sound work has been done amongst us, the papers and cases brought forward have been of high value and interest, the discussion on them being well maintained, and an excellent average attendance has been kept up.

The Medical Defence Association has been successfully launched during my term of office, and the credit of its origin in this colony is due to our Association, I am glad to say. The numbers are steadily growing, and I predict for it a very high and strong position. Medical men generally have only to think of the matter to recognise what a power it can be and a tower of defence for all against the risks which we run in the ordinary daily practice. This Association will bind together the whole of the medical practitioners; its members of council and all office-bearers are chosen from the three medical bodies, and it will be the voice of the profession speaking practically unanimously on many important occasions in the future. I trust everyone present not already a member, if such there be, will remove this disability to-night.

The most prominent feature of medicine generally, and more particularly of recent therapeutics, is the important part taken in the treatment of diseases by (1) *bacterio-therapy*—e.g., in tetanus, enteric fever, cholera, diphtheria, pneumonia, snake-poisoning, tuberculosis, &c., and (2) by the *introduction of organic extracts* prepared from various organs and tissues, and the great use of the *thyroid extract* in nervous and skin diseases. Of the former group I would now draw attention to some of the more recent experiments and results:—

1. Anti-toxin tetanus has been used with varying results, immunised serum from rabbits, horses, and dogs having been tried, the dose being from 20 to 50 c.c. Remesoff and Federoff summarise the following facts after its use:—The duration of the disorder is decidedly diminished, the temperature is reduced, sleep is restored, the attacks of spasm grow weaker and rarer, the pulse frequency is diminished, and, lastly, there is great improvement in the general condition. Thus better results are obtained than by any other treatment, and many lives have been saved.

2. The treatment of pneumonia by the injection of serum from immunised rabbits, or from the serum of convalescents who have recently passed the crisis, is affirmed to bring about an earlier crisis, and, anyway, the treatment seems not to have any injurious effects. The Year Book for 1889 has 30 cases recorded, in some of which benefit doubtless followed, the dose being 5 to 27 c.c. sub-cutaneously from the rabbit immunised, or as high as 130 c.c. from a convalescent patient. As a caution, the serum must not be drawn from a case in which there is a suspicion of kidney disease, as it has been found that the serum drawn from patients suffering from Bright's disease is capable of producing hepatitis when introduced into the veins of dogs.

3. Diphtheria.—It may be looked on as fairly established that the Klebs-Loeffler bacillus is found in all cases of true diphtheria, and that its presence or absence corresponds with marked differences in the course and results of the cases, and that cases where this bacillus does not exist in the false membrane are not true diphtheria at all. As to mortality, the cases in which there is no evidence of this bacillus nearly all recover under ordinary conditions. It is proved also that paralysis similar to diphtheritic paralysis in man is producible by injection into living animals of cultures of the Klebs bacillus. The bacillus itself is never found in the blood or viscera of diphtheritic patients, dead or alive. The treatment, as in most other tests, is successful in proportion to the earliness with which it is used; it doubtless has reduced the mortality in many continental cities from diphtheria by 50 per cent. The discussion at the German Medical Congress at Munich, in April, 1895, was most optimistic. I have only had one opportunity of trying it,

and that in a laryngeal case where the bacillus was identified, and the happiest results followed. I have always looked on this disease as one of the three scourges, the others being, of course, tuberculosis and cancer, but I feel much less dread in treating any case of it now. Opinions vary much as to its effect on paralysis as a sequela, and it is eminently necessary in considering this question that patients be kept under observation for at least three months, as paralytic symptoms may present themselves any time up to then.

4. *Anti-venene* is the name of the new material introduced by Professor Thomas Fraser, of Edinburgh, being obtained by causing a high degree of protection in animals against the toxic effects of snake-venom. This effect is produced by finding first the minimum fatal dose, and giving from 1-10th to one-half of it, and gradually increasing the dose till as much as even 50 times the minimum lethal dose had been given to animals. The blood-serum of these animals so immunised, whether fluid or dried, is called anti-venene. With this he has made four series of experiments, giving (1) a mixture of the venom and anti-venene made outside the body; (2) the two injected sub-cutaneously and simultaneously; (3) the anti-venene some time before the venom; (4) the anti-venene some 30 minutes after the venom. In the first case it was found that four times the minimum fatal dose failed to kill when mixed with 2 c.cm. per kilogramme of the body-weight of anti-venene. The second and third series were also favorable, but not complete. In the fourth it was found that 5 c.cm. of anti-venene given 30 minutes after was a sufficient dose to prevent death after twice the minimum fatal dose of venom. In these results it will be granted that there is great ground for future work and hope, especially as in India no antidote has yet been found efficacious, although the strychnine, ammonia, &c., have been fairly tried. Another new treatment must not be overlooked, viz., the injection of a solution of hypochloride of lime, which gives fair promise.

5. The serum treatment of cancer, in which it is proposed by Emmerich and Scholl to inject erysipelas serum. For this, sheep are inoculated with erysipelas cultures, and the blood serum is freed from micro-organisms by filtration. It is said to be even probably more efficacious in sarcoma than carcinoma—the earlier cancers are naturally more amenable than the old. The dose is varied according to the size of the growth and the condition of the patient—from 1 to 4 c.cm. for a small tumor, and from 10 to 25 c.cm. for a large one, injected daily into the growth. A pseudo-erysipelas is sometimes noted as being set up and lasting from 24 to 48 hours. This question is doubtless in its infancy, and further clinical investigation is absolutely necessary. The blood-serum of the horse is proposed as a remedy for tuberculosis, the horse being stated to be naturally immune against this disease; it is reported as having been used with success in 50 cases in America. Also the serum of asses (which are also immune naturally against tuberculosis) previously inoculated with tubercle, and patients injected to the amount of 10c.c. every other day. The reports of this from Switzerland are favorable, but these must necessarily be received with great caution, though they show the trend of modern therapeutics.

The Royal Commission on Tuberculosis in England presented their report in April, 1895, stating that the flesh of animals suffering from the disease in a severe form, with fever and emaciation, should be absolutely condemned as unfit for human food, while meat from carcasses containing only localised tuberculosis might

be sold, if every particle of tubercle were skillfully removed, and if strict precautions were taken to guard the saleable part from contamination by the infective matter, which might *inter alia* be conveyed by the knife, but this would require the slaughtering and dressing to be done under skilled supervision. This is done on the Continent in many parts; why not in Great Britain and the colonies, including our own Victoria? Expense seems to me to stand in the way of this absolutely necessary reform. Milk is stated to be only infective when the udder itself is the seat of tuberculosis, but this requires an expert to diagnose, and the old caution, so constantly addressed to our people, is the only safeguard, namely, to thoroughly boil all milk obtained through the ordinary trade channels.

Small-pox has knocked at our door again, but isolation and vaccination have been found efficacious. I notice the anti-vaccination cry is again being taken up, and a league formed, but to me it always seems that the reason people object to having their children vaccinated is because they have never felt the want of it here. Our insular position, and the distance we reside from foreign parts where small-pox is endemic, are natural safeguards to a certain extent, but I need hardly emphasise the importance of vaccination done with pure lymph, and the antiseptic precautions that should be used with every operation.

Amongst new drugs I have not had much experience of any of note, but can recommend agathin in neuralgic affections and rheumatism, especially in sciatica, in doses from 5 to 8 grs. Chloralose has also answered well as a hypnotic when tried. *Epidemic diseases* have not been of great virulence or frequency. Typhoid is still with us; diphtheria, scarlatina, and influenza have prevailed to a small extent—the latter has been mostly of a mild type, and affecting the throat; recovery has generally been speedy. *Symphysiotomy*, a revival of an old method, has been extensively advocated and practised, with mostly good results, and often will be found to obviate the necessity of craniotomy, with its loss of the child, and Cæsarean section, with its maternal risk. One case was performed by my colleague, Dr. Rothwell Adams, in the Women's Hospital, with success. The limits of the operation may be stated as between 67 to 85 m.m., and Cæsarean section below 67 m.m. It will generally be found advisable to expedite delivery with the forceps, after separating the symphysis; perfect union is generally obtained with rest and firm bandaging, plaster of Paris sometimes being used; patients can generally walk well after it. *Champetier de Ribes* bag, to dilate the os, is preferable in many cases to Barnes' bags, for reasons which I cannot dilate on, owing to want of time.

The question of *Registration of Midwives* has been a live one at Home during the past year, and a bill has been before Parliament which proposes to legalise midwives. A great difference of opinion exists amongst our profession as to the desirability or otherwise of this Act; one point in it which I consider most dangerous is that is practically proposed to enrol on the list of registered midwives, *without any examination*, all those who have been practising as such before the Act. Personally I am strongly opposed to any legislation which will create such a class of practically obstetric practitioners. Knowing the emergencies which may occur in any case, seemingly the plainest and simplest, how can it be urged that anyone with a three months' training can undertake the sole management of delivery, with no knowledge of anatomy, physiology, or therapeutics? I have seen more than one case of late in which the lives of mother and child have been lost owing to the ignorance of women who pass themselves

off as qualified nurses. I contend that the *twelve months' training* which is compulsory at the Women's Hospital is only sufficient to produce a competent nurse, and not in any way to qualify a nurse to act as an obstetrician.

The Hospital Elections, as at present conducted, are in my opinion perfectly scandalous, and cause a total loss of self-respect amongst us. In Great Britain such appointments are generally made either by (1) a recommendation of a medical committee, or (2) a special election committee on which the medical staff and lay governors are represented. The principle of promotion is almost universally followed there—why not here? Why should not the senior assistant become the full physician or surgeon when a vacancy occurs? I believe it was Professor Elkington who suggested that a joint committee should be formed by so many from the hospital committee, so many from the medical faculty of the University, and from the medical profession, with perhaps, some appointed by the Government. Another suggestion has been made that the assistant staff might be elected as at present, and the in-patient surgeon or physician to hold office for a longer time, with retirement after a certain number of years of office, or on reaching a certain age. The hospitals say they would lose a large amount by falling-off of contributions, but, as the *Argus* has so fully pointed out, this only means a small amount when spread over the four years. A change in the system of election must be made, and that before long; meanwhile I contend that no one should be allowed a vote who has not subscribed for at least four years before the elections.

Professional Charges is a question to be considered at once by the Medical Defence Union. The English system of charges always seem to me a fair one, being made according to the rental value of their abode; meanwhile it seems to me to be equitable, as I believe most doctors do, to charge people according to their means.

Most of us will be in accord with the deputation that waited on the Chief Secretary from the British Medical Association Conference in Bristol, in August, 1894, concerning *Death Certificates*, when Sir Henry Thompson said:—"He hoped that in future legislation the principle should be accepted that no dead body could be buried or otherwise disposed of until the cause of death had been ascertained and certified by the qualified practitioner who had attended to the time of death, or, failing this, until the cause of death had been determined by a qualified medical practitioner after any examination he might deem necessary; thus the defenceless would be protected from insidious criminal attacks, and scientific data regarding the nature and prevalence of disease could be collected and recorded." Mr. Asquith's reply was favorable, but the matter of extra expense seemed to be the main objection.

It is surprising to me to find how few people dress themselves in *woollen garments* next the skin in this colony, where, with its frequent and sudden changes, such material is so essential. How much less there would be of different catarrhal conditions, pneumonia, rheumatism, &c.? Without trenching on political matters, I am convinced that the high price of wools, probably due to high duties, is the important reason for this error.

The increasing competition amongst us promotes the growth of various Medical Aid Societies, and sixpenny clubs exist in most districts, in addition to the ordinary Friendly Societies, where I think it will be agreed that a wage limit should be inserted. The canvassers sent out by the former are most unprofessional, and I cannot understand how a man can resort to such means of obtaining patients and retain his self-respect.

Cycling has come greatly into vogue again, being now

not confined to the one sex, and we are all constantly asked what is our opinion of it as an exercise. If used with discretion, it is, I think, a healthy exercise, but the handles should be brought sufficiently high and sufficiently near the body to prevent stooping, which is unfortunately the almost universal posture, though it is quite unnecessary except for racing. The rate should not be excessive, not more than 7 or 8 miles an hour in an ordinary way, nor the ride so long as to produce great fatigue, for in this, as in every other form of exercise, it is strain which causes the mischief; but I am sure that many of both sexes, by cycling, obtain exercise which is beneficial, and which they would not have in the absence of the machine.

On the recommendation of the committee, it was resolved that—"Resident Medical Officers of Victorian Hospitals may, on application and nomination by a member of the committee, be elected by the committee honorary members for one year."

MEDICAL SOCIETY OF QUEENSLAND.

THE 103rd general meeting of the Society was held on July 9th, 1895, in the Society's rooms, Brisbane. Present: Dr. Hill (President), Drs. Fullerton, Wheeler, Gibson, Love, Byrne, Little, Thomson and Turner.

Dr. BYRNE gave an account of a case of pregnancy, complicated by persistent vomiting and irregularly high temperature, and other symptoms, in which recovery eventually followed after the induction of a miscarriage.

A discussion followed, during which Dr. Love raised the question of the proper course to be adopted when a small portion of chorionic membrane remains behind after extraction of the placenta.

Dr. WHEELER read "Notes on a Case of Acute Intussusception," on "A Case of Poisoning by Caraway Seeds," and on "A Fatal Case of Poisoning by Berries of *Duranta Plumieri*."

These cases were generally discussed, and an opinion was expressed that it would be right to warn the public as to the danger to children from eating the berries of the *Duranta*.

A FATAL CASE OF POISONING, PRESUMABLY BY BERRIES OF *DURANTA PLUMIERI*.

By J. A. WHEELER, M.B., B.S. LOND.,
M.R.C.S. ENG., OF TOOWONG (BRISBANE).

A BOY, *æt.* four years and nine months had been playing about the house all the morning, being in his usual good health, but about 8.30 p.m. he said he felt very tired and sleepy. His mother then noticed that his face was very flushed and the pupils dilated, while his lips and eyelids appeared swollen. She gave him a dose of castor-oil, and put him to bed, where he soon went to sleep. When his father came home about 6.30 he noticed the boy moaning and tossing about in bed. When I saw him at 7 p.m. the boy had just passed a large motion into the bed. This was sticky, ashy-grey in colour, and had a peculiarly penetrating offensive odour, somewhat resembling that of water in which cabbages had

been boiled. The tongue was coated with a dirty-grey fur, and the breath had the same offensive smell as the motions. The lips were slightly swollen and cracked, but not discoloured, and the tonsils and back of pharynx were very red, but not swollen. The eyes were half shut, the lids slightly swollen and edged with a yellowish crust, and the conjunctivæ were injected. This condition of lids and conjunctivæ was recent. The pupils were dilated, very little iris being visible, and they were insensitive to light. The boy was only semi-conscious, rousing up a little when spoken to loudly. The temperature was 105.4, the hands and feet being cold, while the surface of the trunk was dry and pungently hot. The pulse was, as nearly as I could make it, 200 to the minute, imperceptible in the radial artery, and only with difficulty counted in the brachial. It was also very irregular in rate. The respiratory sounds were noisy, but clear, and the heart sounds very faint.

Two drachms of brandy every 15 minutes were given, and under this the hands and feet became warmer and the pulse less frequent, but this effect only lasted for a few minutes after each dose.

About 5 a.m. he began to get convulsed, the spasms being tonic in character, with slight opisthotonos and marked retraction of the head. During the spasms the eyes were widely opened and the pupils less dilated, while the muscles of the face did not participate in the general spasm, and the jaws were not tightly clenched.

At 7 a.m. the temperature had fallen to 101° and the pulse to 160, but it was now much weaker, being only countable in the carotid with carefully-adjusted pressure. About this time he passed another motion, which had the same characteristics as the first, except that it was rather darker. He also vomited a large quantity of inky-looking liquid material, the fluid part of which was colourless, and the solid portion like coffee grounds. It appeared to resemble altered blood, but I had no opportunity of making a chemical examination. He was by this time perfectly unconscious, and the pupils were not so dilated as on the previous evening. The convulsive attacks now became more frequent and prolonged; the pulse gradually became weaker, and he died at 10.45 a.m., 19 hours after he first made any complaint of feeling unwell.

Rigor mortis came on within a few minutes of death, and passed off in about an hour, by which time the lips and the entire surface of the back, from the neck to the buttocks, had become a deep purplish-black. Want of time prevented me from making a *post-mortem*

examination, but a small portion of a motion, passed about a quarter of an hour before death, was scraped from the bedclothes and washed, when a number of partly-digested berries of the *Duranta Plumieri* was found in it. It is not known when he ate these, or how many were consumed, although it is reasonable to suppose that a considerable number came away in the first two motions, which were not examined.

I am not aware that the toxicology of *Duranta* has ever been investigated, but the symptoms described above, taken with the presence of berries in the motions, appear to bear the relation of effect and cause. If this is so, it would appear to be a poison of a cerebro-spinal type, but differing from other cerebro-spinal poisons in the absence of delirium, the markedly high temperature, the early and excessive acceleration and weakness of the pulse, and the purely tonic character of the convulsions.

It is of course dangerous to theorize too much on such a slender basis as a single case, and that but incompletely observed, but I think that the combination of circumstances described in the above report is a very strong piece of *prima facie* evidence for the conclusions arrived at.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896, DUNEDIN, NEW ZEALAND.

It has been found necessary, owing to representations from Australia, to change the date of the opening of the Congress from the 17th to the 3rd of February, 1896.

The executive committee have decided not to include diseases of the eye, ear, and throat in the section of surgery, and have arranged for a separate sub-section for these subjects.

In addition to free passes over the Government railways to members and their wives visiting New Zealand, there will be a reduction in the fares of the Union Steamship Company. The charge for fare has not yet been decided, but we are authorised to state that the amount will not exceed the following:—Return from Melbourne or Sydney, £10 10s.; return from Tasmania, £8.

Members of Congress are invited to give as early an intimation as possible of their intention to be present at this meeting, and contributors of papers are requested to send them to the secretaries of the sections as soon as possible, so that the programme of proceedings may be drawn up and circulated.

All communications may be addressed to the general secretaries—Professor John H. Scott and Dr. L. E. Barnett, University of Dunedin, New Zealand.

Treves' System of Surgery, vol. I., with two col. plates and 463 illustr. (1895), 24s.; by post, 25s. 6d. (Vol II. will be out in about six months' time). L. Bruck, Medical Bookseller, Sydney.

NOTICES.

All communications intended for publication may be addressed "The Editor, Australasian Medical Gazette, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

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New South Wales, Dr. Crago, 34 College Street, Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

SPECIAL NOTICE.

The members of the New South Wales Branch who have not yet paid their Subscriptions for the current year are earnestly requested to do so AT ONCE; otherwise they will be expected to pay the Collector's commission, as the margin left, after supplying the two journals, is too small to allow of the Branch paying commission for the collection of subscriptions.

WM. H. CRAGO,

34 College Street.

Hon. Treasurer.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, AUGUST 20, 1895.

EDITORIALS.

THE SERUM TREATMENT OF SNAKE-BITE.

THE discovery by Weir Mitchell that the poisonous properties of rattle-snake-venom resided in its proteid constituents was the entrance into a new field of toxicological enquiry which has proved extremely fertile.

At the present time the terms toxic proteids and tox-albumens are familiar to everyone, and it is well known that the poisons produced by the micro-organisms of many of the zymotic diseases consist in large part of bodies of a proteid nature. The first definite knowledge of this fact was obtained from the experiments of Hankin with anthrax, and of Brieger and Fraenkel with diphtheria cultures. Shortly afterwards Sidney Martin separated the tox-albumens formed by the

activities of diphtheria and anthrax bacilli, both within the bodies of living animals and in cultivations, and found they belonged to the group of proteids known as albumoses.

The discovery that the injection of sterile filtered cultures of certain pathogenic organisms which contain the toxins they have elaborated, is capable of conferring immunity from the subsequent inoculation of the organisms themselves, marks an epoch in the history of bacteriology. This fact was demonstrated in 1887 by Salmon and Smith's researches on hog cholera. In the following year Wooldridge succeeded in protecting rabbits against anthrax by the injection of filtered cultures of bacillus anthracis, and during recent years these results have been amply confirmed and their applicability extended to a variety of other organisms, amongst which the most notable are, perhaps, those of tetanus and diphtheria.

The next important step was the discovery of the preventive and curative properties of the serum of immune animals, which is associated with the names of Buchner, Behring, Kitasato, and Tizzoni. The injection of the serum of an artificially-immunized animal protects it not only from the baneful results of inoculation with the specific organisms of the disease, but also counteracts the effects of an injection of the toxins, and this to such a degree that it is often possible to inject many times a lethal dose of these bodies without producing more than a trifling illness.

These phenomena of immunity and the curative value of the serum of immunized animals are not, however, confined to the injection of the toxins produced by pathogenic organisms. Ehrlich has shown that the serum of animals rendered resistant to abrin and ricin, the poisonous proteids contained in the seeds of jequirity and castor-oil plants, possesses anti-toxic properties in a high degree.

Attention has been drawn more than once to the analogy between these various toxic proteids and snake venoms, and it has been indicated that a method of counteracting the poisonous effects of any one of these would very probably be efficacious for them all.

Sewall, in 1887, showed that animals could be rendered immune to as much as seven times a lethal dose of rattle-snake-venom, by previous repeated inoculations of very small quantities of the venom. In 1891, Kanthack rendered animals resistant to cobra-venom in the same way. He also made experiments to ascertain whether the serum of these resistant animals possessed any anti-toxic properties. The results of his experiments were entirely negative, but in

February, 1894, MM. Phisalix and Bertrand communicated to the Academy of Science, Paris, the facts that they had been able to partially immunize guinea-pigs against viper-poison by injecting a solution of the venom attenuated by heating to 80° centigrade, and that the serum of such resistant animals was possessed of anti-toxic properties.

Three months later Calmette published the results of experiments on the same subject which he had made at the Pasteur Institute. Calmette succeeded in immunizing rabbits, guinea-pigs, dogs, and asses against the venoms of a variety of snakes by injecting them with gradually increasing doses, until they could tolerate at one injection what would be many times a fatal dose for an animal not so treated. He found the serum of the immunized animals possessed of anti-toxic properties analogous to those found by Behring and Kitasato, Tizzoni, and Roux and Vaillard in the serum of animals immunized against tetanus and diphtheria. If, immediately subsequent to the administration of twice a minimal lethal dose of the poison, 4c.c. of serum from an animal which had been rendered immune to a quantity of cobra-poison equal to twenty times a fatal dose were injected under the skin of a rabbit, the animal was not even ill; whereas an unimmunized rabbit which had received the same quantity died in three hours. In cases in which the injection of the curative serum was postponed until alarming symptoms of poisoning had developed, the injection of larger quantities of the serum was followed by a favourable issue. Animals rendered immune against the venom of the cobra were equally resistant towards other varieties of snake-poison, and the serum from an animal immunized against one kind of venom was as active in preventing the ill effects of an injection from other venoms.

Another observation of Calmette's is of considerable theoretical importance concerning the method of action of anti-toxins. A fatal dose of cobra-venom, mixed with a small quantity of serum from a well-immunized animal, may be injected into a rabbit without even producing any symptoms of poisoning. Nevertheless, if the mixture be heated to 60°c. for a few minutes before injecting, the animal succumbs. The anti-toxic properties of the serum are destroyed at 60°c., but the venom unaltered. This experiment shows that the anti-toxin contained in the serum exercises no direct action upon the poison, but that its beneficial action is due to its operation upon the tissues of the animal, by means of which they are able in some unknown way to withstand the action of the venom.

In June of this year, Professor T. R. Fraser communicated the results of experiments which he had been conducting for some time past on the rendering of animals immune against the venom of the cobra and other serpents, and on the antidotal properties of the blood-serum of immunized animals. These experiments absolutely confirm the work of Calmette which was published in the previous year. Animals were immunized by administering to them a succession of gradually increasing non-lethal doses until the actual minimum lethal had been attained. The subsequent doses, by gradual increments, exceeded the minimum-lethal until each became as much as five times this amount, and still the animal suffered little or no appreciable injury. In one case the resistance was carried so far in a rabbit that it would withstand fifty times the minimum fatal dose for an ordinary rabbit without manifesting any obvious symptoms of poisoning.

When an animal has acquired a resistant power over the lethal dose of one venom, that animal is also able successfully to resist a dose above the minimum-lethal of other venoms. In other experiments indications were obtained that animals immunized against a given venom are capable of resisting the toxic effect of that venom *more effectually* than the toxic effects of other venoms.

Neither Calmette nor Fraser have so far determined the duration of this acquired immunity. They have both, however, ascertained that it lasts for a considerable time, at least a month.

Fraser has obtained serum possessed of very considerable anti-toxic powers from his immunized rabbits. His experiments with the protective serum are divided into four series. In the first series, a certainly lethal dose, capable of causing death in five or six hours, was mixed with the serum and injected under the skin. So small a quantity of serum as .004c.c. per kilogramme of the weight of the animal was, under these circumstances, sufficient to prevent death. When the dose of venom was doubled, .6c.c. was requisite, and 2c.c. of serum per kilogramme counteracted the effect of four times a fatal dose.

The fourth series gives the clearest indications of the antidotal value of the serum. In these experiments the serum was injected half an hour after the introduction of the poison. When twice a fatal dose had been given, 5c.c. of the serum per kilogramme of the weight of the animal was sufficient to prevent death.

The experiments of Phisalix and Bertrand, Calmette, and Fraser have established, on the clearest evidence, that the blood serum of animals

protected against large doses of venom is able to prevent lethal doses of venom of the most poisonous snakes from producing death in non-protected animals, and there is no *a priori* reason why the treatment should not be equally efficacious when applied to man. From the records of cases of snake-bite, it would appear probable that even in India the victim has in the majority of fatal cases not received much over a minimum-lethal dose. It must, however, be borne in mind that the amount of serum which it is necessary to inject increases proportionately with the weight of the animal. In one of Professor Fraser's experiments, which has been quoted above, the injection of 5c.c. per kilogramme of the animal's weight, half-an-hour after the introduction of twice a minimum lethal-dose of venom, was followed by recovery. Assuming that the conditions were the same in the case of a man of 11 stone, it would be necessary to introduce 350c.c. of serum to produce the same result. Such a quantity would be unwieldy to inject, and the actual expense involved in immunizing an animal of sufficient size to produce such an amount of serum would be so great as to exclude the remedy from practical application. There is, however, no reason to suppose that the limit of antitoxic power of the serum of artificially immunized animals has been nearly reached at present, but, by the methods at present employed, that means the introduction of still further quantities of venom into the immunized animal, and although the anti-toxic value of the serum may be increased, and the first objection abolished, it has at the same time become more expensive to produce.

But, as Professor Fraser says, an interest and importance as great as that which can be derived from the practical application of these facts, is to be found in the confirmation they afford to the evidence in favour of the curative value of the serum derived from animals immunized against the toxins of zymotic diseases.

The next important advance in the pathology of the zymotic diseases will likely be the discovery of the principle which underlies the action of curative serum. Calmette has demonstrated that the anti-toxic value of the serum of animals immunized against snake-poison is not due to a direct action of the so-called anti-toxin on the poison, and this conclusion is probably equally true with regard to the anti-toxins against diphtheria and tetanus. As it cannot operate upon the toxins directly, it must exert its beneficial effect indirectly, through influencing the activities of the tissues of the animal. The question which demands an answer is: How does anti-toxic serum place the cells of the animals in a position

to resist the poison? When the venom of the Australian black snake is sub-cutaneously injected into a dog it produces, amongst other results, an extensive disintegration of the red blood corpuscles, but if the animal be previously injected with the serum from another dog which has been immunized against this venom this destruction of red corpuscles does not occur, or, if so, only to a trifling extent. In such a case, did the anti-toxic serum induce a change in the red blood corpuscles, or had it so stimulated other cells in the body that they destroyed the toxine, and so the latter in reality never operated upon the corpuscles? The study of the manner in which anti-toxins affect the details of the toxicological action of all these poisons will no doubt afford a fruitful line of research. There is no toxine the details of the physiological action of which are so well known as those of some varieties of snake-poison. This poison would, therefore, be particularly adapted for such an investigation. Snake-poison also possesses the great advantage over most other toxic proteids that it is much less sensitive to the operation of physical agencies, such as light and heat, and is comparatively easy to obtain in a form possessed of remarkably constant composition.

The efficacy of this treatment of snake-poisoning in animals is undoubted, but it is not yet in a position to put off the swaddling clothes of the laboratory, and to take its place in our system of practical therapeutics. The anti-toxic power of the serum must be enhanced, or else a method discovered to separate from it the body or bodies which are the active agents. There will probably be no great difficulty in accomplishing the former alternative, and the separation of the at present hypothetical entity "antitoxin" will no doubt be accomplished at no very distant date. When this is done, the only difficulty in supplying the anti-toxin in quantity will be a commercial one. To prepare a supply large animals must be immunized. This, however, at the present time, necessitates the employment of a considerable amount of snake-venom, which is a costly commodity.

THE ANTI-TOXIN TREATMENT OF DIPHTHERIA.

DURING the past six months (February to July) 100 reports of cases of diphtheria treated with anti-toxin have been published in the pages of the *Australasian Medical Gazette*. The object of the present article is to give, as briefly as possible, a general account of the results obtained.

Since the discovery of the curative serum, the verification of the clinical diagnosis by demon-

stration of the bacillus of diphtheria has been insisted upon by all authorities as a necessity for the accurate estimation of the value of the remedy. In accordance with this decision—the reasons for which are sufficiently well-known, and need not detain us—a distinction has been made between cases in which the presence of the bacillus was ascertained and those in which no examination was made.

In making comparisons between the cases under consideration and previous ones, it must be remembered that, in the results reported prior to the initiation of the serum treatment, many cases were included which were possibly not diphtheria, though clinically indistinguishable from it. The mortality of such cases is much lower than in diphtheria proper, and their inclusion has tended to make the diphtheria mortality appear lower than it really was.

Therefore, the comparison of all the present cases, irrespective of their bacteriology, with previous ones cannot be considered as in any way favouring the serum; and still less could the comparison of the bacteriologically-diagnosed cases be considered to do so. The favour, if any, is on the side of the previous cases. Having thus cleared the ground for our comparisons, we may proceed to consider the results obtained.

The *fatality* of the series of cases under consideration is shown in the following statement:—

Cases.	No.	Cured.	Died.	Fatality.
Bacilli found...	79	61	18	22·7 per cent.
Not examined...	21	14	7	33·3 per cent.
Total ...	100	75	25	25 per cent.

That a marked reduction on previous fatality has been obtained is specially seen in the cases bacteriologically diagnosed, amongst which the fatality was formerly between 40 per cent. and 50 per cent.

It is necessary to enquire how far the reduction may have been dependent on the inclusion of mild cases. In order to obtain information on this point, the cases were arranged according to their severity at the time treatment was commenced into "not serious," "serious," and "very serious" classes, these terms being used with the significance ascribed to them in the note attached to the report from the Sydney Hospital for Sick Children (*Gazette*, June 15th, 1895, p. 242). They correspond to a "good," "doubtful" or "bad" prognosis under ordinary circumstances¹. Classified in this way, it was found that 30 were "not serious," 41 were "serious," and 29 were "very serious;" so that 70 per cent. of the cases were more or less severe. Hence the lowered

1. The writer must claim indulgence for his interpretation of the initial severity from the symptoms described where no definite statement is made.

mortality does not depend on an excess of mild cases. Further analysis of this classification showed that of the 100 cases the initial prognosis was—

- "Good" in 30, of which all, or 100 per cent., recovered.
 - "Doubtful" in 41, of which 31, or 75·6 per cent., recovered.
 - "Bad" in 29, of which 11, or 35·9 per cent., recovered.
- Of the 79 cases in which the bacilli were found, the initial prognosis was—
- "Good" in 24, of which all, or 100 per cent., recovered.
 - "Doubtful" in 32, of which 27, or 84·3 per cent., recovered.
 - "Bad" in 23, of which 10, or 43·5 per cent., recovered.

Without laying any great stress on the accuracy of these figures, they clearly indicate very satisfactory results, for our previous experiences would lead us to expect a fatal issue in the majority of the "doubtful," and in nearly all the "bad" cases.

The same tale is told by the results of operations. These were required in 43 of the 100 cases, which again indicates that the type of disease was not specially mild.

Tracheotomy was performed in 31, of which 19, or 61·3 per cent., recovered.

Intubation was performed in 12, of which 8, or 66·6 per cent., recovered.

In the 79 bacteriologically-diagnosed cases there were 33 operations—

Tracheotomy in 22, of which 14, or 63·6 per cent., recovered

Intubation in 11, " 8, " 72·7 " "

In both classes there is a slight advantage in favour of intubation, but the number of cases intubated is smaller, and perhaps misleading.

Compared with previous records these results are excellent. At the Congress held in Sydney in 1892 Dr. Clubbe reported 42·5 per cent., and Dr. Crago 52·6 per cent. of recoveries after tracheotomy.¹ The anti-toxin cases show 61·3 per cent. and 63·6 per cent. In the cases recorded by Dr. Jefferis Turner² there were 36·8 per cent. of recoveries after intubation, and Dr. Love's figures³ for laryngeal (presumably intubation) cases show from 40 per cent. to 55 per cent. of recoveries. The anti-toxin cases show 66·6 per cent. and 72·7 per cent. The numbers of cases are small as yet, but the results are eloquently in favour of the anti-toxin.

There is one other factor in the composition of the series which may have influenced the mortality, viz., the age distribution; for the mortality is much lower amongst older patients. On

tabulating the age mortality it was found that 95 of the 100 patients were under ten years of age, and 64 were under five years. The majority were of ages at which diphtheria is most fatal, and consequently there has been no favouring influence as regards age.

The general treatment of the cases was on the same lines as that formerly practised, the use of the antitoxin being the only new feature.

This consideration of the fatality, and of the factors which may have influenced it, renders the conclusion inevitable that the reduced death-rate has been due to the antitoxin. No doubt of its beneficial action can remain in the mind of anyone who has seen the wonderful change for the better produced by it in really serious cases, such cases as in former days we were accustomed to see sinking steadily in spite of all we could do, and which made us realise our utter lack of means to combat the disease.

The effects of the serum on individual symptoms can be better worked out in series of hospital cases, where the conditions to which patients are subjected are alike, than in the present 100 cases from different institutions and colonies; but a brief resumé of the statements in these may not prove uninteresting.

The *general condition* seems to have been improved more rapidly than usual in about two-thirds of the recovery cases. In the others the improvement was as a rule steady and uninterrupted. In some cases the change in the patient's condition is really remarkable, a torpid, extremely "sick" child becoming bright and cheerful in twenty-four hours.

The Local Condition.—Very few statements are made with regard to the actual times of disappearance of the membrane from the throat. In one instance this is reported to have occurred within twenty-four hours, and in several within three or four days after the injections. The usual local applications appear to have been used, with steam, calomel fumigation, etc., in tracheotomy cases. No one appears to have made use of the application devised by Loeffler, and used with great success in Griefswald during an epidemic of diphtheria. For the convenience of those who may wish to use it, it may be stated that Loeffler's fluid consists of an alcoholic solution of 36 per cent. of toluol and 4 per cent. liquor ferri sesquichloratis; to be applied to the throat frequently.

The effect on the *temperature* varied considerably; sometimes a rapid fall to normal followed the injections, at others the fall was slow.

Heart weakness was noted in 13 cases, of which six died from syncope.

1. Report Intercolonial Med. Congress; third session. Sydney, 1892, pp. 310 and 320.

2. *Ibid.*, p. 314.

3. *Gazette*, March 15th, 1895, p. 108.

Albuminuria is reported in 40 cases, and in eight of these there were renal cells and casts in addition. In most cases the albuminuria was present from the first, but in one or two cases it is reported to have appeared after the injections. As albuminuria is said to occur in about 66 per cent. of cases of diphtheria, it would seem to have been less than usual in the present series. In one case suppression of urine and uræmia appears to have caused death.

Paralysis is reported in 17 cases, chiefly of the palate, and slight in amount. There was apparently less paralysis than usual (25 per cent.)

Broncho-pneumonia occurred in four or five cases, and was fatal in one, if not more.

Rashes of an erythematous or urticarial type appeared in 15 cases at various intervals after the use of the anti-toxin. They generally disappeared in a day or two, and no ill effects attended them. The site of injection became congested and swollen in one or two cases, but this subsided in a day or two. The almost entire absence of local ill effects showed that no damage need be feared from the method of use, provided due care be taken as regards aseptis.

The causes of death in the fatal cases, where stated, were as follow :—

Asphyxia	...	...	...	7 cases
Heart failure	...	...	...	6 "
Toxæmia	...	...	...	2 "
Broncho-pneumonia	...	...	...	1 "

These, it will be noted, are the usual causes of death in diphtheria.

Recently we have heard of cases in which death followed the injection of anti-toxin, and the opportunity arose for decrying the use of the remedy.

Three such cases are mentioned in the *British Medical Journal*, May 4th, 1895, p. 987, and in two of these at least there is distinct evidence that the serum was not responsible for the fatal issue.

In the present series no injurious action was noted in any of the cases.

A classification of the cases according to the day of disease on which treatment was commenced showed very decidedly the advantage of early treatment. The percentage mortality increased in proportion to the number of days the patient had been ill previous to coming under treatment. Of 80 cases treated during the first three days of disease (1st-3rd), 10 per cent. died; of 84 treated during the next three days (4th-6th), 20 per cent. died; of 22 treated during the next three days (7th-9th), 33·3 per cent. died; of those treated later, 33·3 per cent. died also. It has been considered that little benefit can be expected

if the treatment be not commenced before the fifth day of illness. After this time pathological tissue changes are likely to occur which the serum is powerless to repair.

The results in the present series were :—

Cases treated.	No.	Cured.	Died.	Fatality.
Before 5th day ...	49	42	7	14·2 per cent.
After 5th day ...	43	29	14	32·5 per cent.

They bear out the remarks about the advantage of early treatment, but they show that we need not despair of success even when treatment is begun in late stages. Cases treated on the 12th, 14th and 15th day of disease recovered. There is no reason why antitoxin should not be used in any stage of the disease; provided the patients be alive, they should be given the chance of recovery which the serum treatment undoubtedly offers.

With regard to dosage, this has varied considerably, being apparently regulated according to the patient's condition. From 1 to 60 cubic centimetres have been used.

The varieties of serum at present in the market vary amongst themselves as to dosage, price, &c. In the present cases the following results have been obtained :—

Serum.	No.	Cured.	Died.	Fatality.
Boffer ...	46	38	8	17·4 per cent.
Behring I. ...	30	23	7	23·3 "
Behring II. ...	1	1	0	nil "
Behring III. ...	1	0	1	100 "
Roux ...	7	4	3	42·8 "
Klein ...	1	1	0	nil "
Aronson ...	3	3	0	nil "
Mixed ...	7	3	4	—
Not stated ...	4	2	2	—

All the serum (Klein's excepted) are prepared on the same general plan, and, notwithstanding the results in the present instance, probably no great difference in efficiency exists between the different varieties if the proper dosage is used. It is interesting to note that the dried serum has been used with success in Brisbane.

The experiences of which the above generalisation has been given support the conclusions already published as the result of European observations, viz., that by the anti-toxin treatment more cases are cured than formerly, and that the remedy is one which may be safely used. To us they convey the additional information that the serum has not lost its curative properties during its long journey from Europe.

The practical lesson to which they point is this:—On seeing a case which may reasonably be considered diphtheria, a swabbing of the throat for bacteriological examination should be taken, and antitoxin given at once. It is not necessary to wait for a bacteriological diagnosis. If the result of this shows that the case was not diphtheria, no

harm will have been done ; if it prove to be diphtheria, 24 hours will have been gained, and 24 hours is a long time in diphtheria. It may make all the difference between success and failure, for the disease can produce tissue changes in 24 hours which no amount of anti-toxin can remedy.

LIBEL ACTION IN WEST AUSTRALIA: ELLIOTT v. VICTORIAN EXPRESS.

THIS was an action tried in the Supreme Court in Perth, before the Chief Justice (Sir Alexander Onslow) and a special jury, on May 21 and subsequent days. The plaintiff was Dr. Charles Bolton Elliott, Government Resident Medical Officer at Geraldton (W.A.), and the defendant the *Victorian Express* Newspaper Company, Limited. The cause of action was the publication of an anonymous letter on October 10, 1894, in a newspaper owned by the defendant company, in which the writer alleged that "Geraldton can show more cripples discharged from its hospital than any other place I've been in. Surely they must be regarded as living monuments of the skill of the Government medico." The defendant pleaded justification. The trial lasted for eight days, during which time a large number of witnesses gave evidence. In summing up, his Honor delivered an eloquent address to the jury. He explained the law of libel, and pointed out that the plea of justification should be regarded as a good ground for aggravated damages should the verdict be returned in favour of the libelled person. The charge was a masterpiece of eloquence and judicial learning. After a retirement of 35 minutes the jury found that the words complained of bore the interpretation put upon them by the plaintiff ; that the article was not a fair comment, and was not void of malice ; and that the defendants had not proved their plea of justification. They, therefore, found for the plaintiff for £500. A verdict for this sum, with costs, was then entered for Dr. Elliott.

On the conclusion of the case, the Attorney-General moved for the attachment of John M. Drew, editor of the *Geraldton Express* (in which the libellous article appeared), for contempt of Court, in commenting upon the case while still *sub-judice*. The Chief Justice remarked that "it was clear that Mr. Drew, whilst his trial was pending—a trial of a vile and contemptible libel, to begin with—had the great effrontery to publish a telegram which, in his Honor's opinion, amounted to a very gross contempt of Court ; and it was his duty, however unwilling he might be, to take notice of it." He, therefore, sentenced Mr. Drew to 14 days' imprisonment, and ordered him to pay the costs of the proceedings.

Dr. Elliott has received the congratulations of the medical profession in the western colony, and to these we may be permitted to add our own.

LETTERS TO THE EDITOR.

LUNACY FROM DRINK.

(To the Editor of the *Australasian Medical Gazette*.)

DEAR SIR,—In your last issue I am reported to have stated, at the June meeting of the B.M.A., that "Lunacy from drink was not considered as legally insane." I fear I did not make myself sufficiently clear upon this point. I wished to impress upon the members that the subject of acute alcoholism—which is really insanity, though temporary, perhaps—is not considered a fit person for admission to an insane asylum for treatment. As you showed in your editorial in June, more than 10 per cent. of the insane persons admitted into asylums owe their condition to drink. It was not to these I referred, but to those who indulge in periodical "bursts." For such an Inebriate Act is badly wanted.—Yours truly,

G. LANE MULLINS.

Waverley, July 30, 1895.

MEDICAL ETHICS AT BROKEN HILL.

(To the Editor of the *Australasian Medical Gazette*.)

SIR,—That M. D. acted perfectly right there can be no doubt. This trouble would have been avoided if Dr. B. had remembered that in 75 cases out of every 100 the request for a consultation means distrust, and is generally caused by some meddling friend. The best way in all such cases is to at once discontinue attending, and request payment for the work already done. Then doctor and patient are alike free.

I am, sir, your obedient servant,

ANOTHER M.D.

REVIEW.

THE DISEASES AND DEFORMITIES OF THE FÆTUS.—

SYSTEM OF ANTE-NATAL PATHOLOGY ; Vol. II. : Congenital Diseases of the Subcutaneous Tissue and Skin. By J. W. Ballantyne, M.D., Etc., Lecturer on Midwifery and Gynecology, School of Medicine, Edinburgh ; Oliver and Boyd, Edin. Price, 10s. 6d.

THE second volume of this work is presented to the profession in the modest words of the author as "an attempt towards" a System of Ante-Natal Pathology. It is, however, the most comprehensive, exhaustive, and yet concise review of the literature of a branch of Medicine and Pathology that has been published in the English language, and will ever stand as a monument of the assiduity of the author.

The volume is divided into Diseases of the Subcutaneous Tissue and Diseases of the Skin, and is interspersed with plates, and a full bibliography of the subject. In treating the subject of Sclerema Neonatorum, the author lucidly defines this much-confused disease, differentiating it from Edema Neonatorum, which he characterises as a symptomatic condition, the former being a disease *per se*.

On the section on Diseases of the Skin, such conditions as Dermatology, the varieties of Ichthyosis, and

the family or order of skin diseases known as Hyperkeratoses are treated. It would seem that the author has sometimes failed to show that all the diseases are actually ante-natal or foetal in origin; but there is one fact, however, which is strikingly brought out, and that is the heredity or family prevalence of most of the diseases under review.

The diseases of the Fœtus are mostly rare, or possibly go unobserved, but the systematic manner in which the author has treated the subject, the cognisance he has given to all and the most recent opinions, mellowed by his own matured experience, will make the book a standard work of reference, and indispensable to a well-equipped library.

MEMORIAL TO THE LATE DR. HUXTABLE.

THE Council of the New South Wales Branch of the British Medical Association have decided to inaugurate a fund for the purpose of erecting a suitable monument to the late Dr. Huxtable, in recognition of the great services rendered by him to the profession. Any gentleman who desires to subscribe may send his donation to the Hon. Treasurer (Dr. Crago), 34 College-street.

The following gentlemen have each promised one guinea:—Drs. Jenkins, Sydney Jones, Thring, Knaggs, Fiaschi, Scot Skirving, Worrall, Clubbe, Chisholm, Quaife, Faithfull, Coutie, Crago, and Mr. L. Bruck.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Haigh, Sam, L.S.A. Lond. 1868, M.R.C.S. Eng. 1863.
Cox, Arthur Brooks, L.R.C.P. Lond. 1890., L.S.A. Lond. 1890, M.R.O.S. Eng. 1890.
Pabst, Joseph Charles, M.R. & B. Ch. Melb. 1893.
Heald, Samuel Haldane, L.R.C.P. Edin. 1892, L.R.C.S. Edin. 1892, L.F.P.S. Glas. 1892.

NEW ZEALAND.

Boyd, A. B., M.B. Ch. B. Oxford, M.R.C.S. Eng., L.R.O.P. Lond. 1892.

SOUTH AUSTRALIA.

Maokay, William, M.B., Ch. M. Ed. 1888.
Maloney, William Robert Nuttall, M.R.C.S. Eng. 1886, L.S.A. Lond. 1886.

TASMANIA.

Harkness, Edward, L. & L. Mid., R.C.P. & R.C.S. Ed., L.F.P.S. Glas. 1896.

VICTORIA.

Noonan, Patrick, L. & L. Mid. R.C.P. & R.C.S. Edin. 1892, L.F.P.S. Glas. 1892.
Fullerton, Robert John, L. & L. Mid. R.C.P. & R.C.S. Edin. 1895, L.F.P.S. Glas. 1895.
Watson, George Glendinning, L. & L. Mid. R.C.P. & R.C.S. Edin. 1889, L.F.P.S. Glas. 1889, M.B. & Ch. M. Edin. 1891.
Giles, Henry O'Halloran, M.R.C.S. Eng. 1894, L.R.C.P. Lond. 1894.

Additional Qualifications Registered.

Thomas Hugh Boyd, M. 1893, F. 1894, R.C.S. Eng.
George Thomas Cooke Adams, Ch. M. & M.D. Queen's Univ. Canada. 1892.

Names Restored to the Register under the Provisions of Section 7 of the Act.

No. 1267, James Alexander Robertson, M.B. & Ch. M. Glas. 1885.
No. 1470, John McGinness, L.R.C.S. Irel. 1884, L. & L. Mid. K.Q.C.P. Irel. 1884.
No. 1682, Horace Percy Godfrey, M.B. 1890, Ch. B. 1891, Melb.

OBITUARY.

LOUIS RALSTON HUXTABLE, M.B., CH. M. EDIN.

It is with real sorrow that we have to record the death of Dr. L. Ralston Huxtable, the late Hon. Secretary to the N.S.W. Branch of the British Medical Association, which took place on July 30th at his late residence, 36 College-street, from diphtheria complicated by pneumonia. Dr. Huxtable was recovering from an attack of influenza, when, on July 20, he complained of sore throat, and sought the advice of Dr. Wilkinson, who detected patches of membrane on the pharynx. A subsequent bacteriological examination revealed the presence of the "Klebs Loeffler" bacillus. On Tuesday morning, July 23, at six o'clock, he was seized with excruciating pain in the left side, associated with constant vomiting and hæmorrhagic sputum. The former continued for twenty-four hours, necessitating the use of nutrient enemata. The throat symptoms became less prominent, but the lung trouble increased—physical examination showed double lobar-pneumonia—resolution failed to take place, and death ensued on the 30th instant, at seven in the evening, from asthenia, after much suffering.

Dr. Huxtable was attended throughout his illness by Dr. Jarvie Hood, aided by Drs. Clubbe and Worrall, and by Dr. Sydney Jones, who met them in consultation on the 27th instant. His old friend Dr. Hull, hearing of his serious condition, came down from Cootamundra, and was with him constantly to the end. The suffering was even greater than usually accompanies pleuro-pneumonia, and was borne by Dr. Huxtable with the utmost patience and courage. He recognised the gravity of his case, and expressed a determination to make a big fight for it, but, when it was evident death could be no longer warded off, he accepted the inevitable with calmness and resignation, bade good-bye to his family and friends, and to Nurses Booker and Edwards, who had nursed him with devotion, and did not forget kindly messages to his old colleagues and the executive officers of the Sydney Hospital, with whom he had worked so amicably. It is no exaggeration to say that the news of Dr. Huxtable's untimely death was felt by the majority of the profession as a distinct personal loss and sorrow. Only on July 19, at a Council meeting held in his own house, he took as usual most active part in the proceedings, and read with evident delight a letter from the Hon. Secretary of the New Zealand Branch in which a desire was expressed to give their support to the *A. M. Gazette*. Though somewhat pale and

wearied, he spoke in his wonted clear, forcible, and eloquent language, and no one then present dreamed that on the following day he would have been stricken down with a fatal disease. By this sad event the profession of N.S.W. has lost one of its most brilliant and honoured members, and our Branch of the British Medical Association has been deprived of the services of a man whose self-sacrificing efforts have enlarged its influence and power for good to a degree little anticipated two years ago.

On March 2, 1894, when Dr. Huxtable became Councillor and Honorary Secretary the members numbered 192, and have since increased, owing in a great measure to his tact and zeal, to 325, making our Branch, outside the United Kingdom, the largest in the British Empire. He was mainly instrumental also in initiating steps for the formation of a library in connection with the Association. But the most notable result of his labours for the Branch, and that for which he will always be remembered, was the acquisition of the *A. M. Gazette*; the almost insuperable difficulties to the successful accomplishment of this object were overcome by the exercise of a tact, resource, and energy truly remarkable. Dr. Huxtable received his medical education at the University of Edinburgh, and, after taking the usual degrees, held the following appointments in the old country, viz.:—House Physician to the Royal Maternity Hospital (Edinburgh), Assistant Physician to the Border Counties Asylum, Melrose, Scotland; Resident Clinical Assistant to the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, Isle of Wight; and House Physician to the Royal Free Hospital, London. The testimonials obtained on leaving each of these posts were of the most flattering kind, stress being laid in almost every one on the qualities of high character, energy, thoroughness, courtesy, and kindness which were so markedly characteristic of his later life.

He then entered the Emigration Service, and this eventually led to his taking up practice in Sydney, where, at the time of his death, he was "Visitor in Lunacy" and Hon. Physician to the Walker, Children's, and Sydney Hospitals. His services to the latter institution could not well be over-rated—indeed it may be truly said the new buildings owe their existence to his able advocacy. The Public Works Committee carried the proposal for the re-building of the hospital by a majority of one, and this gentleman has informed us that, previously an opponent of the scheme, he was converted to the opposite view by the logical force of Dr. Huxtable's arguments.

Dr. Huxtable was a highly accomplished, cultivated physician, and in "Diseases of the

Nervous System" especially, his accuracy of observation, rapid generalisation, and quick grasp of the salient points of obscure cases, made his opinion extremely valuable. In addition to his medical knowledge, he was widely read in general literature, from which his remarkable memory enabled him to enforce his arguments and adorn his conversation with apt and never-failing illustrations.

He took a keen interest in all the recreations and enjoyments of life, was a fair musician, a capital sportsman, and a good all-round athlete. In the Medical Staff corps he was a "Surgeon-Captain," and in uniform, his smart, soldier-like appearance attracted attention. Dr. Huxtable's personal character endeared him to all those who had the privilege of his intimacy and friendship. His brightness was infectious; not even the most depressed could fail to be animated and inspired by his cheery optimism. Generous to a fault, "his heart and hand were open, and both free." In his mind, attuned to high aims and ideas, and filled with poetic imagery, petty meanness could find no place. He scorned what was ignoble. In the words of the *Daily Telegraph*, "He was widely recognised by his brother practitioners to be a man of striking ability and high character, a faithful friend, and in all the relations of life a true-hearted and honourable gentleman."

Dr. David Grant, of Melbourne, concludes a kind and sympathetic letter with the following words:—"He was a man of a very high type, free from the slightest taint of pettiness or meanness, honourable, chivalrous, courageous, and unselfish. His affections were very strong, and his detestation of anything that savoured of devious courses, or fell short of a high standard of honour, was sure to find expression in a fine strain of emphatic denunciation that was good to listen to. A notable feature in his character was his sanguine and happy optimism and his lively sense of humour, which worked together to smooth his way over many rough places. I can hardly think even now that a spirit so strong, happy, and buoyant has succumbed to the onslaught of the fiend Diphtheria. We may say most emphatically 'He should have died hereafter.'"

Dr. Springthorpe also pays tribute to his memory. He writes:—"You can add with truth that his courtesy and fairness had a very great deal to do with our Victorian Branch coming in on the journal question, and that all here deeply regret his untimely end."

His funeral took place on August 1st, and was very largely attended by the members of the medical profession, the general public, and the

personal friends of the deceased. The cortege moved from College-street, at 8 o'clock, to St. James's Church, King-street, where an impressive service was conducted by Archdeacon Langley, assisted by the Revs. T. R. Abbott and F. Albery. The procession then re-formed, and proceeded along Oxford-street to the Waverley Cemetery, where the burial took place, the service at the grave being conducted by the Revs. T. R. Abbott and Albery. The funeral was an unusually large one, and amongst those who attended at the grave were Dr. E. J. Jenkins (President New South Wales Branch British Medical Association), Dr. Sydney Jones (Vice-President B.M.A.), Dr. S. T. Knaggs (Editor *A. M. Gazette*), Dr. Mullins (Vice-President E.S.M.A.), Dr. J. A. Dick (Hon. Secretary E.S.M.A.), Dr. MacLaurin, M.L.C., Drs. Crago, Paton, Worrall, Thomas Dixon, Faithfull, McCormick, Herbert Blandland, Jarvie Hood, Russell, James Cox, Weekes, Hall, Armstrong, Roth, Angel Money, Goode, Foreman, T. M. Kendall, Murray Will, Gordon Macleod, Murray Oram, Clubbe, James Macleod, W. O. Wilkinson, Kenna, G. E. Rennie, Jamieson, J. J. Power, F. H. Quaife, Warren, Binnie, Rutler, Veitch, Thring, T. Evans, Langhorn, George Marshall, Hamilton Marshall, M'Murray, Scot Skirving, Chisholm, Mathieson, Ashburton Thompson, Fiaschi, Hull, J. M. Martin, Muskett, MacCulloch, O'Reilly, Pickburn, Megginson, Newmarch, Dowdell, Gill, F. N. Manning, Prof. Anderson Stuart, and others. Nurses from the Sydney and Children's Hospitals attended the service at St. James's Church. There were a large number of wreaths, most of them from private friends. There were wreaths also from the medical institutions with which the deceased gentleman had been connected, from the Sydney Hospital, and from Mr. and Mrs. Conran, of Melbourne. A very handsome wreath was likewise sent by the cabmen on the College-street rank.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during June to every 1,000 of the population was 2·37, and of deaths 1·02; 89 deaths or about 22 per cent. of the total deaths occurred in public institutions. The deaths of children under five years of age during the month were 143, or 33·03 per cent. of the total, 101 being under the age of one year. Eight deaths of child-bearing women took place during the month, or one death of a woman to every 126 births recorded.

DR. SHADRACH EDWARD ROBERT JONES, M.D. St. And., L.S.A. Lond. 1844, M.R.C.S. Eng., 1843, who practised at Raymond Terrace for the last few years, died on July 15th, at the age of 78 years.

DR. L. G. DAVIDSON, late of Goulburn, having obtained one of the Government appointments in Fiji, left Sydney for Levuka on July 31.

DR. SINCLAIR FINLAY, of Stroud, has returned from his trip to England.

DR. H. J. D. INNES, late of Victoria, has succeeded to the nucleus of Dr. Stokes, at Murrumburrah.

DR. C. JOHNSON has removed from Robertson to Bowral.

DR. H. LILIE, late of Moree, having returned from Europe, after attending the principal hospitals in Berlin for nearly two years, has resumed practice at 175 Liverpool-street, Sydney.

DR. C. D. MACCARTHY, late of Burrowa, has commenced practice at Mosman's Bay, near Sydney.

DR. J. MALCOLM has left Helensburgh for the old country.

DR. J. E. J. MOFFITT, late of Balmain, has commenced practice at Burrowa.

DR. E. J. NUGENT has commenced practice at Nimitybelle, near Cooma.

DR. A. F. PARKER has removed from Woollahra to Lismore.

DR. L. E. ROW, of Grenfell, has left for Townsville (Q.), to commence practice there.

DR. E. S. STOKES, of Murrumburrah, has succeeded to Dr. A. E. Fitz Patrick's practice at Crookwell.

DR. A. E. WALSH, a Melbourne graduate, has started practice at Wyalong.

NEW ZEALAND.

THE proportion of deaths registered during June to every 1,000 of the population was 0·96 for Auckland and suburbs, 1·03 for Wellington with suburbs, 0·62 for Christchurch and suburbs, and 0·94 for Dunedin and suburbs. The total births in these four boroughs during June amounted to 320, against 365 in May. The deaths in June were 153, to which males contributed 86 and females 67. Forty of the deaths were of children under 5 years of age, being 26·14 per cent. of the whole number; 31 of these were under 1 year of age.

A NEW journal, styled the *Australasian Homœopathic Medical Gazette*, was to make its first appearance this month. It is to be published in Dunedin quarterly, and will be edited by Dr. R. S. Stephenson, formerly of the Melbourne Homœopathic Hospital.

DR. JAR. MCBREARTY has been appointed Surgeon-Captain in the Greymouth Naval Artillery Volunteers.

DR. A. BRONTE has removed from Ashurst to Wanganui.

QUEENSLAND.

DR. F. CHALLANDS has removed from Kidsvold to Childers.

DR. D. S. MACDONALD has been appointed City Health Officer for Rockhampton, at a retaining fee of ten guineas p.a., with fees for services rendered.

SOUTH AUSTRALIA.

DR. A. W. HILL, formerly of Terowie, has commenced practice in Adelaide as a specialist in eye, ear, nose and throat diseases.

TASMANIA.

DR. E. HARKNESS, late of Rosedale (Vic.), has commenced practice at Fingal.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during June to every 1,000 of the population was 35.26, and of deaths 16.21. Males contributed 55 per cent. and females 45 per cent. to the mortality of the month. Children under five years of age contributed 21 per cent. to that mortality, as against 28 per cent. in June, 1894. One hundred and sixty deaths, or 27 per cent. of the whole, took place in public institutions.

THE official visitors to the Wendouree Lunatic Asylum, near Ballarat, in their quarterly report to the Chief Secretary, expressed marked dissatisfaction at the condition of the inmates. They allege that the patients, both male and female, are inadequately clad, and were found when visited to be shivering with cold. The want of proper clothing is stated by the visitors to be so noticeable that they feel it would be a disgrace if they did not, in the cause of humanity, bring the matter under the notice of the Government. Objection is also taken to the practice now in vogue of promiscuously distributing articles of clothing after they have been washed, instead of marking them for the sole use of the inmates by whom they had previously been worn.

HENRY CROSSEN, L.F.P.S. Glas. 1851, one of the oldest Echuca residents, and for some years also a resident in Melbourne and Bendigo, died at his residence at Echuca, on July 29th, after a short illness, the cause of death being senile decay. Dr. Crossen was 72 years of age. He came to Echuca in 1864, had been a borough councillor, and had filled the position of coroner.

WE much regret to have to record the death of Dr. Paul Howard MacGillivray, M.R.C.S. Eng. 1855, F.R.S., M.A., LL.D., who died at his residence at Bendigo, on July 9th, at the age of 61, from erysipelas, which followed on a cold received whilst attending a case in the Wedderburn district by night. Dr. MacGillivray was a man of great scientific attainments, and one of the foremost naturalists of the day, and amongst degrees conferred on him in recent years were those of LL.D. of Aberdeen University, Fellow of the Linnean Society (London), and the fellowship of the leading scientific societies of Paris. Dr. MacGillivray was educated at King's College, Aberdeen, where his father was one of the University professors, and he was intended for a career of science. At the death of his father he had to take up the profession of medicine as a means of livelihood. He arrived in the colony in 1862, when he commenced practice at Williamstown, but soon after he removed to Bendigo, on being appointed resident-surgeon at the Bendigo Hospital. As a medical practitioner he was one of the foremost in Victoria, and he was also an ex-president of the Victorian Medical Society. He was author of "The Fossil Polyzoa of South Australia," "The Polyzoa of Victoria," and collaborator with Prof. McCoy in the "Prodromus of the Zoology of Victoria."

DR. J. C. BAIRD, of Healesville, has been made a Justice of the Peace.

DR. G. E. CUSSEN, of Kensington, has purchased the late Dr. Mullaly's practice at Ballarat.

DR. G. W. DAMMAN, late of Walhalla, has succeeded to the practice of Dr. Gibbs at Werracknabeal.

DR. J. W. DOW, late of Carisbrook, has succeeded to Dr. Harkness' practice at Rosedale.

DR. H. H. GILES, late of the Adelaide Hospital, has commenced practice at Werribee.

DR. C. DE W. HEARD has removed from Werribee to Brighton.

DR. H. F. MAIN, of Malmesbury, has been appointed Medical Officer of the Kyneton Hospital; he was the only candidate for the vacant position.

DR. G. E. MORRISON, a native of Geelong, and formerly resident surgeon at the Ballarat Hospital, has just published a book entitled "An Australian in China." The volume tells the story of a journey across China to British Burmah, which Dr. Morrison made last spring, dressed, for the greater part of his journey, as a Chinaman, with a pigtail attached to the inside of his hat.

DR. W. J. A. MOSS, late of Avenel, has succeeded to Dr. Cussen's practice at Kensington, near Melbourne.

DR. A. G. E. NAYLOR, late of Romsey, has succeeded to Dr. Ley's practice at Minyip.

DR. F. M. PEEBLES has been elected a member of the honorary medical staff of the Bendigo Hospital, in the place of the late Dr. Macgillivray.

DR. E. A. STRAHAN, a Melbourne graduate, has settled at Korumburra.

DR. G. T. WOOLLEY, of Castlemaine, has been appointed consulting surgeon to the Maldon Hospital.

MEDICAL APPOINTMENTS.

Courtney, Charles Arthur, L.R.C.P., to be Public Vaccinator at Learmonth, Vic.

Dow, James Wallace, M.D., Ch. M. Toronto, to be Health Officer for the shire of Rosedale, Vic.

Hoggan, Bertram Brooke, L.R.C.P., to be Public Vaccinator at Romsey, Vic.

McCaw, Hugh, M.B., Ch.M. Glas., to be a Public Vaccinator for the district of East Taieri, N.Z.

Ross, John, M.B., M.S. Ed., to be a Public Vaccinator for the district of Waipawa, N.Z.

Showman, Louis Frederick, L.R.C.P., to be Health Officer for Warrimbool Shire, Vic.

MARRIAGES.

MARRIAGES.

BANOROPT—JONES.—On the 10th July, at All Saints', Brisbane, Thomas Lane Banoropt, M.B., to Cecilia Mary, eldest daughter of the Rev. Thomas Jones, rector of Indooroopilly, Q.

CRAIG—COUNON.—On the 29th June, at Presbyterian Church, Pymble, N.S.W., Robert Gordon Craig, M.B., Ch.M., of Newtown, Sydney, to Maria Graeme, daughter of G. Counon, Christchurch, N.Z.

CUTTS—RATHIE.—On the 18th July, at Wesley Church Parsonage, Melbourne, W. H. Cutts, M.D., to Isabella Jane Rathie, late matron of the Melbourne Hospital.

DAMMAN—CRAMER.—On the 10th July, at Christ Church, South Yarra, George William Damman, M.B. et Ch.B., of Werracknabeal, to Isabella, youngest daughter of the late Hugh Cramer, of Castlemaine, Vic.

DEVLIN—MACMAHON.—On the 10th July, at the Catholic Church, Pymble, N.S.W., Dr. Henry William Devlin, of Parkes, N.S.W., to Dora MacMahon, daughter of P. MacMahon, Willoughby.

M'LEOD—ROGERSON.—On the 19th June, at the Presbyterian Church, Glen Innes, James M'Leod, M.B., Ch.M., Hurstville, N.S.W., to Una, eldest daughter of John Rogerson, Glen Innes.

MARKS—DONKIN.—On the 19th June, at St. Francis's Church, Nundah, Q., E. G. Keighly Marks, M.D., of Aramac, Q., to Harriet Stuart Donkin, eldest daughter of Henry Donkin.

THOMPSON—HODGKINSON.—On the 17th July, at St. John's Cathedral, Brisbane, Robert Thompson, M.D., to Mabel, second daughter of W. O. Hodgkinson, of Brisbane.

Wanted to Purchase, Second-hand Operating Chair, suitable for Eye, Ear, Nose, and Throat work. Send particulars to Dr. A. W. Hill, Mutual Life Chambers, Adelaide, S.A.

REPORTED MORTALITY FOR THE MONTH OF JUNE, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	111,244	221	125	67	...	...	...	3	...	6	18	15	15	5	...	2
Suburbs	275,615	784	308	179	...	1	9	3	6	7	24	37	23	6	...	6	
NEW ZEALAND.																	
Auckland & suburbs..	42,718	80	41	10	...	...	4	3	...	...	5	6	1	1	...	...
Christchurch ..	42,211	59	26	7	...	...	1	2	1	...	2	2	1	3	...	1
Dunedin ..	48,991	76	46	13	...	...	...	1	...	1	6	8	6	1	...	2
Wellington ..	88,710	105	40	10	...	...	1	1	...	...	5	2	5	3	...	1
QUEENSLAND.																	
Brisbane	56,075	...	...	...	}	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582
SOUTH AUSTRALIA.....	345,888	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Adelaide	39,749	...	...	...		...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																	
Hobart	36,201	68	46	7	...	...	1	...	2	...	3	4	1	2	...	...
Launceston	23,075	54	21	5	...	...	...	...	...	...	1	...	...	2	...	...
Country Districts	99,927	267	69	...	...	...	2	1	1	1	...	...	...	...	...	...
VICTORIA.																	
Melbourne	64,171	98	59	{	...	...	2	6	3	7	71	72	72	41	2	3
Suburbs	380,661	1174	526	
Ballarat and Suburbs	42,000
WESTERN AUSTRALIA*	82,072	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending.

METEOROLOGICAL OBSERVATIONS FOR JUNE, 1895.

STATIONS	THERMOMETER.					Mean Height of Barometer.	RAIN.		Mean Humidity.	Prevailing Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.			Depth.	Days.		
							Inches			
Adelaide—Lat. 34° 55' 33" S.; Long. 138° 36' E.....
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.....	...	63	53.3	40	...	...	6.14	25	76	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.....
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.....	...	63.6	46.4	29	...	...	7.35	15	84	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.....	...	58	43.1	32	...	...	6.89	16	80	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.....	...	68.3	47.3	31.6	29-931	...	1.45	14	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.....	...	60.6	43.7	28	30-007	...	2.46	13	...	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.....	...	66.1	50	29.5	29-999	...	1.74	13	...	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.....
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.....	...	70	54.4	41.8	30-148	...	0.93	13	75	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.....	...	62.8	48.8	32.5	...	...	9.52	23	77	...

ORIGINAL ARTICLES.

A NOTE ON THE OVERLOOKING OF MITRAL STENOSIS.

BY ANGEL MONEY, M.D., F.R.C.P. LOND.,
SYDNEY.

MITRAL stenosis is frequently overlooked; the cases are diagnosed as weak or irritable heart, or dilated left ventricle. The mistake arises chiefly from this cause: Mitral stenosis may yield nothing to physical examination except an alteration in the first sound of the heart; there may be no murmur, either presystolic, diastolic, or post-diastolic; no thrill, and no accentuation of the second sound at the left base. Even repeated examination in the recumbent and upright postures may fail to reveal either reduplication, triplication, bruit-de-rappel or stenotic murmur about the apex-beat of the heart. But the first sound invariably partakes of the quality of the second sound, is high-pitched and short, click-like in character. Occasionally in such cases some more distinct sign of mitral stenosis may be elicited by frequent careful investigation. In my experience the cases under discussion are very prone to complain of nervous symptoms of the anginoid type. The symptoms, too, are not usually relieved by any preparation of digitalis; but in one case the hypodermic injection of one hundredth of a grain of digitalin gave great relief. Most cases are distinctly benefited by nitroglycerine, nitrite of soda, amyl nitrite, nitrite paraldehyde, and sweet spirits of nitre. Bromides and arsenic also appear to do good in the majority of cases.

The diagnosis of dilated left ventricle can hardly be defended, but the error arises in this way: Extension of the area of cardiac dulness to the left is difficult to determine in fat women, who are the most frequent subjects of this complaint. The breast is in the way, and the apex-beat cannot be successfully localised; the click-like first sound is set down to a dilated ventricle acting weakly, and the other physical signs are assumed to exist. But the sound due to a dilated ventricle is not the same thing as the sound heard in mitral stenosis. The proof that these are cases of mitral stenosis consists (1) in their dying during the degenerative period of life with all or some of the signs of dilated right heart, with its usual mechanical consequences; (2) in the discovery at the autopsy of fairly well marked contraction of the mitral ostium; but not infundibuliform, or button-hole valve. Lastly, the lesson to be learnt

is that, unlike neuralgic, neurotic, or weak and irritable heart, they do not tend to get better as age advances.

CASE OF DIPHTHERIA TREATED BY ANTI-TOXIN.—INTUBATION.

BY L. E. F. NEILL, B.A., M.B., CH.M.,
EDGECLIFFE (SYDNEY).

F. F., MALE, *æt.* 7 years, subject of chronic enlargement of tonsils. Was said to have had a "cold" and bronchitis for five days. Though apparently better the day before being seen, his breathing had subsequently become noisy. Medical advice was sought on account of attack of dyspnoea.

On examination.—T. 100°, P. 112; tongue furred; inspiratory and expiratory stridor; cough muffled, voice hoarse; some recession at episternal notch, supra-clavicular spaces, and episternum; a large gland behind each angle of the lower jaw; fauces reddened, tonsils greatly enlarged; right tonsil showed several small discrete, yellowish, soft-looking patches; chest clear; breath sounds somewhat weakened.

A mixture, throat pigment, and sulphur insufflations were ordered. Directions were given that no application was to be made to the throat until a culture tube had been inoculated from the throat. On my visiting the patient for this purpose within two hours I found that sulphur had been insufflated twice, and that patient had vomited once, bringing away a large "phlegm-like mass." There was a vast improvement manifest; patient was breathing easily, without stridor or any recession, at the rate of 20 per minute. He had experienced such relief after the first insufflation that he had himself requested its repetition, some time after which he vomited. Throat was clean and free from mucous accumulation and exudation when swabbing was taken.

On the 14th stridor had gradually returned and two attacks of dyspnoea had been experienced. Tonsils each showed a whitish patch. T. 100.4°, P. 90, R. 20. Dyspnoea gradually became worse, with marked inspiratory and expiratory stridor and restlessness. Tightness about the throat was complained of, and there was well-marked retraction at lower ribs, supra-clavicular spaces, and episternal notch. At 4.45 p.m. I injected 7cc. of anti-toxin (Burrough's and Wellcome) in interscapular region. Shortly afterwards, as marked laryngeal obstruction was present, I intubated, using the tube suitable to his age. After the tube was in position, the

child, getting his hand free, caught hold of the silk thread attached to it, and pulled the tube out, but I immediately re-inserted it without difficulty. There was a moderate amount of cough following the operation, breathing being easy and free. At 9 p.m. I again injected 6cc. of anti-toxin just above the right nipple. Patient had slept well since intubation. R. quiet, 18; T., 100.4°; P., 96.

On the 15th, at 8 a.m., after sleeping well through the night, with easy respiration, the tube was coughed up. When seen at 12 m., T. 100.2°, P. 90, R. 18. Pulse of fair volume, occasional pause in beat; slight inspiratory stridor, but no indrawing of soft parts of chest; tongue fairly clean; glands in neck a little softer; on left side of neck a small gland to be felt below the large one previously felt; tonsils much reduced in size, and redness much less; on inner surface on each tonsil a small area of white powdery aspect; cough louder, and has lost muffled character; voice still somewhat hoarse; looks quite bright; cheeks slightly flushed; passed urine in good amount soon after 12 a.m. (said to have been the first passed since 3 a.m. of day before). Anti-toxin 5cc. injected above left nipple.

On the 16th, T. 99.8°, P. 84, R. 19. A faint inspiratory sound audible. On inner surface of left tonsil, about its middle, a small white patch of membrane, loosening at edges. 5cc. of anti-toxin injected at 12 m. above left nipple.

Small specimen of urine obtained, clear, amber-coloured, acid; with boiling, and nitric acid in the cold, no albumen; with the acid, a well-marked ring of urohaematin, and after standing for an hour or two crystals of nitrate of urea were precipitated at bottom of test-tube; with picric acid, a white ring at contact line, disappearing on gently heating.

On 17th, T., 98.4°; P., 78, regular; R., 18, easy; glands in neck a little smaller; tonsils clean, of moderate degree of enlargement; feels well.

On the 20th, temperature rose to 100°, with P. 78, R. 17, and fell again to normal on the 22nd, no cause for rise of temperature being apparent. Urine increased in amount, and a specimen examined on the 21st showed it to be pale, sp. gr. 1006, acid; no albumen to boiling or nitric acid, and no precipitate from latter on standing, and with no change on addition of picric acid.

The diagnosis of diphtheria was confirmed bacteriologically by a report from the Board of Health on the 15th June that the "bacilli of diphtheria were present in small numbers." A culture tube inoculated from the patient's throat on the 20th was found to be free from their presence.

TERTIARY SYPHILIS IN AUSTRALIA.

By A. W. FINCH NOYES, JUN., F.R.C.S.E.,
SURGEON IN CHARGE OF THE SKIN DEPARTMENT, MELBOURNE HOSPITAL; AND OF THE
SKIN DEPARTMENT, ALFRED HOSPITAL
(MELBOURNE).

In a leading article of this *Gazette* (October 15 1894, p. 350) entitled "Syphilis in Australia," the beneficial results that occur from the method of administering mercury in small and oft-repeated doses are dealt with, and the decreasing virulence of the disease in its later stages is referred to this almost universal method of treatment. None but a few anti-mercurialists would contest these statements, but, continues the article, "our readers will, we think, rack their brains to recall a case of tertiary syphilis occurring within the last five years. If they can do so, then we shall be glad of the notes of the cases, and publish them as great curiosities."*

The assumption that tertiary syphilitic manifestations exist only as *great curiosities* is, I think, a dangerous one—one that will lead to many errors in diagnosis.

Tertiary syphilis is not only not rare, but it is comparatively common.

On looking through the notes of four hundred cases of syphilis that have passed through my hands at the Melbourne Hospital within the last three years, I have collected the records of sixty cases of tertiary manifestations of the skin, subcutaneous tissue, and mucous membrane of the oral cavity amounting to fifteen per cent. of all cases of syphilis treated.

To these must be added cases which find their way to the general surgeon, the physician, and to specialists in other branches, with manifestations that occur in the nervous system, as paralysis of special nerves, opthalmoplegia, optic atrophy, locomotor ataxy, general paralysis of the insane affections of the viscera, kidneys, liver, testes, and lungs, periostitis and scleroses of the osseous system, destructive ulceration of the rectal and vaginal mucous membrane, gummata in fibrous structures, affections of the vascular system, etc., the sum total of which is probably about three-fifths of all cases of tertiary syphilis (reckoning the other two-fifths for affections of the skin and mucous membrane of the oral cavity). This would bring the average number of patients who have probably developed tertiary symptoms to about 37 per cent. of all cases that have acquired syphilis—that

*These remarks are undoubtedly addressed to the general practitioner, and not to the hospital surgeon with a special practice; however, many of the cases about to be recorded had been previously seen and treated for their tertiary symptoms by medical men in general practice before coming to the hospital.

is, reckoning the ratio of the various organs attacked to be about the same as in Paris.

The following is a tabulated form, giving the ratio of the various organs attacked by tertiary syphilis, from a contribution by Alfred Fournier to the International Congress of Dermatology, held in Paris in 1889 :—

Tertiary Syphilides	787	
Sub-cutaneous Gummata	428	
Tertiary lesions of the genital organs	157	
" " tongue	152	
" " soft-palate	179	
" " pharynx	71	
" " other mucous membranes	20	
Bone lesions	336	
Lesions of the osseous nasal septum, and of the hard-palate	173	
Arthropathies	14	
Gummata of tendons	8	
" muscles	12	
Lesions of the digestive tract	4	
Ano-rectal syphilomata, rectal stricture	5	
Lesions of the larynx and trachea	23	
" " lungs	14	
" " heart	2	
" " aorta	6	
" " liver	9	
" " kidney	9	
" " testicle	145	
" " eye	69	
" " ear	8	
Nervous system.	Cerebral syphilis	461
	Cerebro-spinal lesions... ..	11
	Monoplegias	3
	Syphilis of the medulla	77
	Tabes	355
	Cerebro-spinal tabes	45
	Muscular atrophies	19
	General paralysis	32
	Dementia	9
	Ocular paralysis	57
Facial paralysis	13	
Other nervous affections	3	
Other affections	8 cases.	
Total	3,429 cases.	

If the calculation, based upon the ratio in which the skin, subcutaneous-tissue, and oral mucous membrane were attacked, and which assumes that about 37 per cent. of all cases that have acquired syphilis show some tertiary manifestation, approximates the truth, then the percentage here is much in excess of that in other parts of the world where records have been kept. Thus, "Rollet found that among a large number of syphilitic cases, treated in the Antiquaille at Lyons, 15 per cent. were tertiary. Mauriac thinks that in Paris the percentage may be estimated at 5-10-20, the lower numbers referring to patients treated privately, the higher numbers to individuals treated in hospital during the secondary stage. Vojsa, during a period of ten years, found from 6 to 8 per cent. of tertiary

cases among the syphilitic patients of the Allg. Kraukenhaus in Vienna." Haslund himself found in Copenhagen 791 cases of tertiary syphilis amongst 6,364 syphilitic patients, giving a percentage of 12.4. *A priori*, one would have expected to find the percentage here considerably lower than in many other countries. For, leaving aside personal idiosyncrasy and alcoholism (etiological factors which are as prevalent here as in other countries), tertiary syphilis is undoubtedly more prone to occur in the debilitated, the scrofulous, and the half-starved than it is in patients whose surroundings are more favourable to existence. Here there is not the same struggle for a bare subsistence, the anxiety, the overwork, and the bad hygienic surroundings with which the lower classes in European countries have to contend. Considering, then, that one set of etiological factors is not so favourable to the development of tertiary manifestations here, the next factor, and the most potent—the absence of proper and continued mercurial treatment—must be held accountable. My hospital experience confirms this opinion. In no case manifesting tertiary symptoms had a proper course of mercurial treatment been carried out. Some had taken the remedy for a few weeks, others had had no treatment at all, or only such as was obtainable at the hands of the quack, the practising chemist, or the herbalist, for a short time, until funds were exhausted. This class of patient, as a rule, in other countries finds his way straight to the hospital, and receives proper treatment from the first. Even when the hospital is reached there is much difficulty in persuading out-patients to attend regularly for a prolonged course of treatment.

I do not doubt but that in time the gumma will become an unknown quantity, but that period is, I fear, far distant. The question would wear a different aspect if one could ensure strict adhesion by the patient to the mercurial plan of treatment for a lengthy period; but the large majority of patients—hospital ones, at all events—are no sooner rid of the cutaneous eruption, the ulcerated throat, or the periosteal pains, as the case may be, than they disappear, and forget their syphilis until forcibly reminded of it by recurrence of secondary symptoms, or by some tertiary manifestation.

The following data extracted from my notes regarding age, sex, character of lesions, &c., may be of some interest to your readers. In the 60 cases of tertiary syphilis recorded there were 24 females and 36 males. The ages of the patients ranged from 23 to 65 years. The period that

*Haslund : The Causation of Tertiary Syphilis. *Brit. Journ. Dermatology*, 1892, p. 214.

had elapsed since the initial symptoms varied considerably, the shortest being 12 months, and the longest forty (40) years.

As to previous symptoms of syphilis, in 38 cases the primary sore was acknowledged, in three it was doubtful, and in nineteen it was denied. In thirteen cases there was a total absence of previous syphilitic symptoms, but in these, as in the other cases recorded, the character of the lesions and the result of therapeutics put the diagnosis beyond question. In six cases in which neither primary nor obvious secondary symptoms had existed, excepting for the history of miscarriages, the tertiary manifestations were the first indications of syphilis. I refer to syphilis by conception, in which women presented themselves with breaking-down gummatous lesions without even having had any primary or secondary symptoms (excepting miscarriages), unless loss of flesh, with a certain amount of debility and failure in general health, are to be construed as secondary symptoms. These are cases which not infrequently lead to errors of diagnosis.

With regard to the character of the lesions for which the patient sought advice, they were in the majority of cases superficial breaking-down gummata, serpiginous "lupoid" ulcerations, gummatous infiltrations, or nodular syphilides. Of the breaking-down superficial gummata, 29 were in the skin and sub-cutaneous tissue in varying parts of the body, 11 in the soft palate, and three in the tonsils. In 13 cases the condition was that described by Hutchinson as serpiginous "lupoid" ulceration of the skin. In four cases the lesions corresponded with a nodular syphilide, without any tendency to ulceration. The duration of the tertiary lesions varied from one week to six years.

THREE PECULIAR CASES OF TYMPANIC DISEASE.

By W. F. QUAIFF, B.A., M.B., ETC., SYDNEY.

A SHORT *péris* of the following three cases, occurring in my experience, has occurred to me as desirable. They are all examples of inflammatory disease of the mastoid antrum of a subacute type, and all connected with the presence of a foreign body in those cells of the temporal bone. The series goes to indicate the prospective advantage to be derived, in all cases where it can be obtained, from a more thorough opening up of these passages than the natural drainage can afford. As a question of theory, this goes without saying; but anything that will shed even a meagre light upon the practice

will be very acceptable. The importance of acquiring such complete control of the inflammatory discharges from the tympanum at the earliest possible period is extreme, if the fenestræ of the inner wall are to retain their perfect function; and it is only at a slightly later period of the disease that the facial canal and the tegmen tympani come to be in danger. These, perhaps, are the only considerations that would make a patient undergo an operation of so much significance as the opening of the mastoid antrum; and the amount of septic matters that can be contained in parts of the attic, tympanum, and mastoid entrance, in close proximity to the important structures I have named, is sufficient excuse for a widening of the limits within which an enlargement of the bone channels may fairly be asked for. The desirability that the surgeon should, where possible, obtain permission to excise ossicles and tympanic membrane is now coming to be generally recognised in many forms of intra-tympanic disease; and it is going only a little further to ask that, where there is the least suspicion of an extension of the septic process into the cells, an artificial passage should be chiselled out for the scouring away of the putrid products.

CASE 1.—In October, 1886, I was sent for hurriedly to see a Mrs. X., who, being of unsound mind, had, in a paroxysm of melancholia, attempted to shoot her life away through the ear with an American Novelty pistol. This weapon has a cartridge containing a minimum of powder and a bullet of the size of a small pea; and the brain was not reached. The shot entered the meatus, and passed backwards and inwards for three-quarters of an inch into the mastoid cells, where it could be felt with a probe, and portions of the lead rubbed off upon the rough end of an ivory knitting-needle. At the same time there was a rupture of the tympanic membrane. The parts were stained and discoloured with powder and the oozing of blood. As there was no immediate danger to life, the bullet was left alone for the time, and measures were taken simply to relieve the very frantic condition of the patient. In the course of a few days the temperatures were noticed to be slowly rising, and some puffiness was showing itself in the tissues behind the ear; it became, therefore, necessary to consider the removal of the foreign body. An incision was made after Schwartz's method, but closer than usual to the auricle; and this was separated with the cartilaginous part of the meatus, and drawn forwards. The shot-hole in the bone now became evident, and was enlarged with a chisel and mallet into a conical cavity by the removal of a

portion of the surface behind, until the lead was reached. It was found to be flattened into a thin plate, and impacted into the entrance of the cells, so that it became necessary to chisel away the thin plate of bone between the conical cavity and the deeper part of meatus, and therewith fracture the back of the annulus tympanicus, and extend the rupture of the membrane. The lead was completely removed, the cavity thoroughly cleansed, and the parts dressed with sublimate wood wool, and complete cicatrization took place, with a linear scar behind the auricle. The perforation of membrana also healed in a puckered manner; and it is worthy of note that a very troublesome and constant tinnitus nearly disappeared from this time forward, this being doubtless connected with the relief of pressure from the labyrinth, by the counter-tension of the new cicatrix. The hearing was never restored; but then it appears to have been a fact that for many years previous the patient had always heard only with the other ear.

CASE 2.—A boy, C. R., *æt.* 12. "Has been suffering since four years of age from the ears. The hearing of the left ear is completely gone, and there is continually a slight oozing, rather putrid, discharge from the meatus. On the other side the hearing is reduced to 4/40. This condition of things appears to be the result of measles. On further examination I find the right membrana much injected in the upper portion, and there are indications of serous effusion within the tympanum. The left meatus is full of stinking sero-purulent fluid; and, on clearing it with a cotton mop, I find the membrana non-existent, and the tympanum packed with cholesteatomatous masses. The right mastoid is said to be painful on pressure, but there is no swelling; the left, on the other hand, is decidedly puffy. I decide to puncture the right membrane, and apply leeches upon the corresponding mastoid process; and, on the left side, to clear out the masses as thoroughly as possible, and wait for events." This was done, and in the course of a fortnight the hearing on the right side had improved to 34/40; the redness of membrane and the pain over mastoid had gone. The condition of left ear, though there was certainly less discharge and somewhat sweeter, remained practically as before. It was clear that portions of putrid tissue were still lurking in the tympanum unseen; and, after some persuasion, permission was obtained to chisel down upon the mastoid cells. The operation was carried out very much in the same way as in the former case; and, as the function of the ear as a hearing organ appeared to be gone, the cavities were very thoroughly scraped with a small spoon, and then filled in with iodoform. The

cavities appeared to have been much dilated by the cholesteatomatous growths, and much of these was peeled out from situations where there was previously no sign visible. The issue of this case was ultimately complete stoppage of the diseased processes in the left ear, and in the right nearly total restoration of the hearing. I may say that the naso-pharynx was in a slightly catarrhal state, but nothing more. This case came back two years afterwards with slight recurrence of the trouble on the right side, which quite subsided after suitable treatment.

CASE 3.—A man from Western Australia, about 50 or 55 years of age. Has long had trouble with his left ear, which, however, for a great number of years was in a state of quiescence. About four years ago he had an attack of influenza, which started the ear again. There is a thin putrid discharge from the meatus, and a slight tenderness of the whole of the tissues about the ear, so that he cannot lie on that side with any comfort. On examination, I find, perhaps, the slightest degree of puffiness of that mastoid as compared with the other. The meatus, when cleaned out, appears to be of a funnel shape, about normal in length, but nearly closing at the inner end. Through the small aperture which remains is seen a grey mass, the exact nature of which it is impossible to make out. It may be either a slough or a bit of sodden wool. The man is easily persuaded to undergo the operation. Only a piece of the inner end of posterior wall of meatus is removed by chisel in this case, for the sake of drainage. A large plug of very putrid cotton-wool is found filling the tympanum. Drainage secured by a rubber tube passing out behind the auricle. The source of initiation having been removed, this case quickly and easily healed up, and all discharge from the meatus had completely ceased in a fortnight. The patient resumed his former pursuits in Western Australia.

SOME CLINICAL OBSERVATIONS ON DIPHTHERIA.

By W. F. LITCHFIELD, M.B., HOUSE SURGEON
AT THE H. S. C., SYDNEY, LATE RESIDENT
MEDICAL OFFICER AT P. A. H., SYDNEY.

THE following remarks are drawn from a personal observation of 150 cases of diphtheria (bacteriologically examined) treated at the Hospital for Sick Children, Sydney.

I propose to review some clinical features in connection with the pulse, the respiration, the urine, and the nerve disorders in diphtheria. Some of the points have not hitherto been

touched upon, and I do not know that the subject has been approached from the same point of view before.

It is necessary to say at the beginning that these remarks will be found to hold good whether diphtheria anti-toxin be employed in the treatment or not.

THE PULSE

The pulse in diphtheria presents for study a variety of interesting and important conditions. These may be considered under five headings:—

1. The pulse in an ordinary attack of diphtheria.

2. The pulse in malignant diphtheria.

3. The pulse in convalescence.

4. The pulse in post-diphtheritic heart-failure.

5. The pulse in conditions of asphyxia.

I. The pulse in an attack of diphtheria is quickened. Thus, in a child four years old, with pharyngeal diphtheria of moderate severity, on the fourth day of the disease, the temperature standing at 100°, the pulse-rate was 120. This it found to be about the average, the rate, of course, varying, as in health, with the age. In milder cases there is less disturbance, and the rate increases with the severity of the attack; thus, the advent of nasal diphtheria in a pharyngeal case would send the pulse up.

In this stage the pulse is soft, but as a rule regular and of fair size.

II. Next we come to the pulse in malignant diphtheria, where death is threatened or brought about by heart-failure, due to toxæmia. It is merely an exaggeration of the preceding condition. In this phase the pulse is rapid, very soft and small, becoming smaller as the heart-failure progresses.

Irregularity in force is noticed, but is not marked. In a child four years old suffering from malignant diphtheria the pulse rate was 156, and in a child of twelve years, in the same condition, the pulse was 140 per minute. Both of these cases died in the toxæmic stage, and are average specimens, showing the rate of pulse that may be expected.

III. In the large majority of cases, during convalescence after diphtheria, the pulse becomes slowed. This may be called post-diphtheritic slowing of the pulse. This slowing sets in as a rule about the tenth day of the disease. It may appear earlier—e.g., in a child five years and three months old, who had an attack of medium severity, the pulse slowed on the sixth day; or later, e.g., in a child fifteen months old, who had laryngeal diphtheria, the pulse slowed on the twenty-third day. As a rule, however, it may be expected about the tenth day. It is not necessary that the local process should be quite

cured before the post-diphtheritic slowing occurs. Before the use of anti-toxin it was common to find the pulse slow while there was still membrane in the throat. Under the anti-toxin treatment, the throat is generally clear before the slowing occurs.

The slowing of the pulse is usually distinct, but it is only very marked in a few cases—e.g., *average case*, child 10 years old, moderately severe pharyngeal case, onset of slow pulse 10th day, range 60 to 90 per minute for several days; *well marked case*, child 6 years old, mild pharyngeal, onset 7th day, range 44 to 80 per minute.

Associated with the slowing of the pulse there is as a rule marked irregularity. This affects both the force and rhythm; and the pulse may intermit. Besides being irregular, the pulse is usually soft; but all degrees of tension are seen from a fairly strong pulse to the failing pulse that is described under the next heading. The weakening of the pulse in this condition is not always in proportion to the slowing. Occasionally there is considerable cardiac asthenia without slowing; and occasionally the pulse, though slow, is fairly good all through. *Post-diphtheritic cardiac slowing* is found to last from a few days to several weeks, the pulse first gaining in strength, and then in frequency.

IV. Related closely to the foregoing is the pulse in post-diphtheritic cardiac failure. It is probably due to an exaggeration of the same pathological process that underlies the production of post-diphtheritic slowing of the pulse. In the series, seven deaths were ascribed to post-diphtheritic cardiac failure. In every case post-diphtheritic slowing ushered in the failure. In most of the cases, however, before death the pulse quickened up to normal, or a little above it.

In no case of post-diphtheritic cardiac failure has the pulse been very rapid. Sometimes the slowing progresses with the failure—e.g., in one case during the last three days the pulse fell gradually from 120 to 40, becoming at the same time progressively weaker.

The severity of the disease in the first place determines to a great extent the degree of post-diphtheritic cardiac asthenia, but mild cases may be followed by considerable slowing with tendency to failure of the pulse.

In all the cases that died from post-diphtheritic cardiac failure in this series ample warning was given of the impending danger, but it is conceivable that death may occur suddenly, under exertion or excitement, in this stage of slowing and weakening of the pulse.

V. Lastly, we have to consider the pulse in cases where asphyxia is threatened. In this

condition the pulse rate is increased, and we get examples of greater rapidity than in any other form of pulse in diphtheria. Whether the asphyxia is caused by obstruction in the larynx, in the bronchioles after operation, by bronchopneumonia, or by paralysis of the respiratory muscles, the result is the same. The pulse rate increases with the cyanosis, and may be assumed to be an indication of its amount.

In a child four years old that died from asphyxia due to blocking of the bronchioles the pulse was 160, and in a child of one year in the same condition 200 per minute.

Though rapid, this form of pulse is regular, and of fair strength and size.

Occasionally, after tracheotomy, a phenomenon worth noting is observed. In a few cases, where the obstruction in the larynx has been very great, and the consequent cyanosis extreme, after tracheotomy the pulse is found for some hours to beat away with the same rapidity that it did before the trachea was opened. The probable explanation of this is that owing to the excessive strain thrown upon the heart before tracheotomy, a temporary condition of cardiac irritability, analogous to Da Costa's irritable heart, is produced.

It is only left to say that occasionally we see a pulse in diphtheria the result of a combination of some of the above forms. An example will serve as an illustration of this:—D. C., age 5½, on the 14th day of the disease was found to be suffering from malignant diphtheria, while the pulse only registered 100 per minute. Here the condition underlying post-diphtheritic cardiac slowing had been produced before the malignancy had reached its height.

Summary.—Thus we get three different forms of pulse failure in diphtheria—(1) in toxæmia, (2) in post-diphtheritic heart-failure, (3) in asphyxia; and it will be seen at once that, besides having distinctive clinical features, each has its own pathological substratum.

Sometimes, in diphtheria, death is attributable to uræmia. In this series only one death could be put down to that cause alone. No alteration in the pulse was observed until just before death, when, coincident with a rise of temperature to 105°, the pulse went up to 180 per minute.

THE RESPIRATION.

There are some things in connection with the respiration in diphtheria that are striking from a clinical point of view.

When a laryngeal case of diphtheria is watched from the beginning an interesting series of phenomena may be observed. The first intimation of the involvement of the larynx is a croupy cough. Soon there is some inspiratory stridor,

with some dyspnoea, and recession of the soft parts of the chest on inspiration. Expiratory stridor now supervenes, while the dyspnoea increases, there is more recession, and the cough becomes less clangy. At first the breathing is merely deepened, but as the obstruction increases the extraordinary muscles of inspiration and expiration are called into play, and soon it will be seen that expiration is chiefly concerned. In fact, a slow asphyxia is taking place.

If now tracheotomy or intubation be performed, after the preliminary coughing has subsided, a stage of apnoea comes on. This is probably a reflex process due to the sudden inflation of the lungs, and is seen after each of the first few inspirations.

Next, one of three things will be observed, either—(1) The respirations will become normal, or (2) will become rapid and shallow, or (3) will become rapid and laboured.

In the case of No. 1 there may be no further trouble, but dyspnoea may supervene, when the case will progress like No. 3.

In No. 2 the rapid and shallow breathing is indicative of more or less extensive collapse of the lung. It will be accompanied by a rise of temperature. This condition may clear up or pass on to a dyspnoic stage and progress like No. 3.

In No. 3 the membrane has already extended into the smaller air passages, and is accompanied by a variable amount of collapse of the lung. There is often a rise of temperature, but a future reference will be made to this point. The result will now depend on the degree of membranous extension and the age and vitality of the patient. Young children will quickly succumb to asphyxia, while older children may get rid of the membrane, and after some days of dyspnoea get well. A special reference will have to be made in connection with the use of anti-toxin in these cases at a future time, but in the main the above applies to diphtheria treated with or without anti-toxin.

Before tracheotomy, in cases of laryngeal obstruction, as a rule, some information as to the amount of membranous extension may be gleaned from the respiration rate. When the trachea and bronchi are involved, the rate is found to be greater than when the membrane is confined to the larynx. In a child of four years suffering from considerable laryngeal obstruction, and with no or only slight tracheal involvement, the respirations will be found to be about 24 per minute. If, however, the membrane has spread, and is lining the trachea and bronchi, the respirations will be about 44 per minute. This varia-

tion in the breathing under the conditions mentioned is found to be sufficiently constant to render it of some prognostic value.

(To be continued.)

SOME NOTES ON THE VIENNA CLINICS IN 1895.

By A. J. BRADY, HON. SURGEON TO THE DEPARTMENT FOR DISEASES OF THE EAR, NOSE, AND THROAT, SYDNEY HOSPITAL.

NOTWITHSTANDING the establishment of post-graduate clinics in England and America, the clinics of Vienna still continue to attract large numbers of medical men from these countries. The writer did not notice any falling-off in the number of English-speaking medical men attending the clinics now and ten years ago; and in conversation with some of them—men in large practice in New York, who had come again to visit the schools of Vienna—they attributed the attractions of these clinics to their perfect organisation for teaching purposes. Everything else is made subsidiary to this object. The professors and assistants make what, to them, is an attractive income from the fees, and their time does not seem so much taken up by private practice as men in similar positions in the countries named. The methods of teaching in the Vienna clinics have been so well described by Dr. Knagge, in a paper which he read before the New South Wales Branch of the B.M.A., that it is unnecessary to do so again in detail. The writer was courteously allowed by the professors, in whose clinics he had worked before, to attend their demonstrations as a visitor. A number of old faces are missing. Professor Schrötter has given up laryngology for internal medicine; Professor Schnitzler is dead, as is his assistant, Beregrassy. The latter was an excellent teacher, and his death is a decided loss to the Poliklinik. Professor Politzer's method is somewhat different to formerly. He has given up the twenty minutes' lecture, and devotes all the time to examining and explaining the cases. He speaks English or French to those who cannot understand German. Professor Gruber shows no decline in activity or vigour. The writer had the privilege of seeing some of his operations on the mastoid. Professor Urbantschitsch has revived a method of treatment of deaf-muteism, and other high degrees of deafness—methodical hearing drill or exercises (*methodischer Hörübungen*), the principal of which has been known for some time to aural surgeons, but it was reserved to Urbantschitsch to make it a practical thing, to show how it can be best carried out, and to demonstrate its remarkable possibilities.

The professor describes his method as follows:—“I take a case of apparently total deafness. I next show the deaf person a given vowel, which I call into his ear; or more frequently two vowels, viz., A and E, which are, in a previously indicated order, spoken slowly, and at first with a loud voice, into his ear. [He dwells on the sound like a singer producing a musical note, as the duration of the sound seems to be as important as its loudness.] At the beginning of the exercise it is frequently seen that no hearing impression is received, yet later, sometimes even in the course of a few minutes, a distinct hearing power follows, by which, however, in the beginning, A is in no sense heard as A, nor E as E. Yet they can be distinguished from each other. By continued exercises the correct hearing impression is cultivated till it is attained.”* So the fine vowels are similarly dealt with. So soon as a well-marked trace of hearing becomes evident, different words, which have been previously pointed out to the patient, are called into the ear. The hearing drill must, at each sitting, be carried out only for a short time, otherwise an exhaustion of the acoustic power comes on. At the beginning the drill is followed for five minutes at a time, and this is repeated six times a day. Later the time is gradually increased. Total deafness, even in deaf mutes, occurs in only a small proportion of cases. In the Wien-Döublinger deaf and dumb school Urbantschitsch, on examining one hundred pupils, found only three cases of total deafness; so that a large proportion of deaf mutes are capable of receiving benefit from treatment. Not one of the least useful of the results of the hearing drill is the improvement in the intonation and pronunciation of the patients which it brings about. The writer saw a man, who was under treatment by this method, in Urbantschitsch's clinic; he had been suffering from a high degree of nerve deafness, amounting to almost total loss of hearing. After six months treatment he could hear ordinary speech at the distance of three yards. It is evident that treatment requiring such frequent repetition as this must be carried out in a school, or at home, with regular visits to the physician. It was found that exercise with the speaking voice improved the preception for musical tones, and vice versa; so Urbantschitsch uses a harmonium to assist in the treatment,—the loud and sustained tones of this instrument being useful to arouse the dormant auditory functions.

Dr. Emanuel Max, assistant in the Allgemeinen Poliklinik in Vienna, has introduced a new method of treating neuralgia of the tympanic cavity, which has produced excellent results. It

*Über den Einfluss Methodischer Hörübungen auf den Hörsinn Wiener Medizinische Presse No. 43, 1894.

is not intended to take the place of other treatment, but any addition to our means of dealing with a condition which sometimes proves so resistant to all treatment will be welcomed. Aural neuralgia in connection with diseased teeth is fairly common, and generally disappears at once on the extraction of the offending teeth; but idiopathic neuralgia of the ear is comparatively rare, and when encountered the physician may sometimes exhaust his remedies in vain for its relief. The writer remembers a case very similar to the first in Dr. Max's* series, associated also with the same reflection of the pain down the side of the pharynx, which is explained by the tympanic cavity getting its sensitive nerve supply from the fifth and glasso-pharyngeal nerves. This case for a long time resisted all treatment.

Dr. Max's treatment consists of making three or four pressure movements with Lucae's spring probe on the short process of the malleus. This must be done under the guidance of the forehead mirror, and the excursions of the movements must be small. An ordinary probe, bent, and covered at the end with cotton wool, can be used, if the spring pressure sound is not procurable. The pressure movements are to be continued daily till the pain ceases to return. The writer can testify to the excellence of Dr. Max's clinic for practical operation on the mastoid process. The opportunity of operating on the cadaver under his guidance cannot fail to be instructive to even the most experienced surgeon.

CLINICAL LECTURES ON HYDATID DISEASE.

BY ALFRED AUSTIN LONDON, M.D. LOND.,
LECTURER ON FORENSIC MEDICINE AND
ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

II.—THE ADVENTITIOUS SAC OF HEPATIC HYDATIDS.—(Continued from page 322.)

(h) Suppuration of the Adventitious Sac.

WE have seen that a hydatid cyst is so little irritating to its adventitious sac that even its rupture is not necessarily followed by suppuration; we must therefore seek for some other factor in the causation of suppuration, and that factor undoubtedly is the introduction of septic germs. As to how they gain access to the interior of the sac we have no certain knowledge: we can only surmise that it is most probably through the circulatory system, although it is

just conceivable that pyogenic cocci might travel against the current and reach the sac via the intestine and biliary tracts. When once the germs have gained access to the interior of the sac, the dead and ruptured hydatid becomes an irritating, instead of an innocuous, foreign body, and the efforts of nature are directed towards its expulsion. I do not think that there is any evidence that, after suppuration has occurred, obsolescence of the hydatid even takes place: cases in which this is alleged to have occurred are in reality instances of degeneration of the cyst without actual suppuration of the sac. Unless a microscopic examination be made of the fluid which has been withdrawn through an aspirator needle in a case of supposed suppuration, it is impossible to be certain that we are dealing with pus, so deceptive is the appearance of the fluid contained in a degenerating hydatid.* With the microscope, however, there can be no difficulty, for, instead of myriads of pus corpuscles, in degeneration we meet with merely broken down material, cells undergoing granular changes, plates of cholesterol, perhaps some hooklets or even decaying scolices, and possibly a fragment of the ecto-cyst. And further, not only is the fluid of a hydatid cyst apt to simulate pus where degeneration has occurred, but the cyst itself after long maceration in bile may, as I have recently shown, be extracted through an ordinary aspirator needle in the form of a viscous, yellow-ochrey fluid, which might be easily mistaken for bile-stained pus.†

I may here remark that whereas, as I believe, degeneration of the cyst may occur without rupture, it is certain that suppuration never takes place within an unruptured hydatid cyst, for, as has been mentioned before, the laminated ecto-cyst is impervious to anything which is not of a crystalloid nature. It is not generally laid down with sufficient clearness that suppuration is a process dependent upon septic inflammation of the adventitious sac, and that pus cannot form within, nor penetrate the walls of, even the most delicate and thin hydatid cysts. It is no uncommon thing to find daughter cysts with clear contents floating about in the suppurating sac of a hydatid tumour.‡

As regards the symptoms which usher in suppuration, whilst as a rule they do not differ from those which we usually associate with acute suppuration in general, and with abscess of the liver in particular, I am inclined to think that I have met with cases in which fever and rigors were absent, although I cannot quote any specific

*Vide Case IV.

†Vide Aust. Med. Gaz. Aug., '95, p. 330.

‡Aust. Med. Gaz., June '96, p. 198.

instance. Some confirmatory evidence on this point is desirable, as cases of degeneration may have been mistaken for suppuration of the sac. I think, however, that I may make this statement, that whereas degenerating liver cysts usually are but slightly odorous, suppurating cysts have a most powerful stench as a rule.

Whether suppuration ever occurs before the rupture of a living cyst one cannot say. The mere occurrence of septic inflammation of the sac would probably cut off the supply of nourishment and cause the death of the mother cyst before pus had time to form. It is more likely that rupture precedes suppuration, as a rule, and in a measure predisposes to it.

Suppuration naturally alters the aspect of the sac internally, and the smooth lining is replaced by a layer of granulations; the whole thickness of the adventitious sac becomes more or less inflamed, and the peritoneal surface is involved in the process, so that external adhesions, if they have not already formed, are liable to be contracted with surrounding structures. In the case of those cysts which are situate on the upper surface of the liver, we find adhesions to the diaphragm¹ and then to the base of the lung, but at any stage the abscess may point, and possibly burst either into the sub-phrenic space, the pleural cavity², or into a bronchus. Elsewhere in the liver the abscess may extend downwards or in a horizontal direction, and the sac may become adherent to the parietal or visceral peritoneum, and on perforation occurring the pus and membranes may be discharged into the peritoneal cavity³, or into any hollow viscus or passage, such as the gastro-intestinal tract,⁴ the urinary tract, or the gall-bladder.⁵

When, as a consequence of suppuration, ulceration or sloughing of the adventitious sac occurs within the liver area, instead of perforation we may meet with equally serious complications, for the slough may involve the wall of a blood vessel or of a large bile-channel. In the case of the blood vessels, if obliterative changes have not previously taken place, there will very likely result some form of pyæmia, either general pyæmia from implication of a hepatic vein⁶, or, much more rarely, local pyæmia from suppuration within a branch of the portal vein⁷ (pylephlebitis). In the case of the bile ducts, instances are recorded where

fragments of cyst membrane have become impacted in a large branch, and the pus, being unable to escape along the duct into the intestine, has caused suppuration in the peripheral tributaries of the obstructed duct. Secondary suppuration may also take place at some distance from the primary seat of suppuration, probably through the medium of the lymphatic vessels. Small abscesses are occasionally met with in the liver substance in the neighbourhood of the suppurating sac, which remind one of the satellites of a planet.* I have never seen a sub-phrenic abscess complicating a suppurating liver hydatid, probably because adhesions to the diaphragm are more likely to occur; but I have met with empyema after an operation, and I have no doubt as to the possibility of its occurrence independently of rupture of the suppurating hydatid into the pleural cavity.

There is reason to suppose that fatal peritonitis may occur in connection with suppurating cysts of the liver without rupture of the sac†.

In my experience, the rupture of a suppurating hydatid of the upper surface of the liver into the pleural cavity, or into a bronchus is not nearly so frequent an occurrence as the rupture of a living hydatid of the liver. Possibly the reason for this is that a suppurating hydatid tumour causes symptoms for which the patient seeks surgical treatment, whereas a living hydatid may cause absorption of the diaphragm, and may burst into the thorax, before the patient is aware of there being anything serious the matter with him.

CASE IV.—ILLUSTRATING THE RESEMBLANCE BETWEEN PUS AND THE CONTENTS OF A DEGENERATING HYDATID.

Mrs. N., æt. 40, Private Practice, 1884-94.

On November 26th, 1884, this patient was aspirated in the tenth right interspace posteriorly; 3vi. of fluid, which appeared to be "laudable" inodorous pus, were withdrawn. Under the microscope no pus cells could be seen, but only degenerated echinococci, cholesterin plates, and granular debris. The specific gravity of the fluid was 1032. Had the fluid not been examined microscopically, it would have been taken to be pus.

CASE V.—ILLUSTRATING RUPTURE INTO THE RIGHT PLEURAL CAVITY.

Wm. H., æt. 35, The Middlesex Hospital, May-June, 1878.

This man was under the care of the late Dr. Headlam Greenhow, to whom I was then Physician's Assistant. During life he was

1. *Vide* Case I.

2. *Vide* Case V.

3. *Vide Aust. Med. Gazette*, '95, p. 199; also, Case VI.

4. *Vide* Case VII.

5. *Vide* Case VI.

6. *Aust. Med. Gaz.* Mar., '93, p. 81.

7. *Aust. Med. Gaz.*, June, '95., p. 198.

* *Vide* Case VIII.

† Davies Thomas, Vol II., p. 10.

supposed to have right empyema, but after death it was found that a suppurating hydatid of the right lobe of the liver of enormous size had ruptured through the adherent diaphragm into the pleural cavity, which was lined with soft, opaque lymph, and contained two pints of pale-green foetid pus, with daughter cysts, gas also escaping on opening the thorax. The cyst in the liver contained six pints of pus, with membranes and cysts, and it communicated with the pleural cavity by two openings.

CASE VI.—ILLUSTRATING PERFORATION OF SAC INTO THE GALL-BLADDER, ADHESION TO THE COLON, AND RUPTURE INTO THE PERITONEAL CAVITY.

John W., *æt.* 28, Adelaide Hospital, September, 1888.

Patient had been operated upon for a hydatid of the right lung. At the autopsy another cyst was found in the right lobe of the liver, which had formed an adhesion to the colon, and had also ruptured into the peritoneal cavity, death being due to this cause. The right lobe of the liver was transformed into a multi-saccular cavity, containing green pus and hydatid membranes. This cavity communicated through a large opening with the gall-bladder, which formed one of the sacculi.

CASE VII.—ILLUSTRATING RUPTURE INTO COLON, AND CALCIFICATION OF SAC.

Arthur O. K., *æt.* 45, Adelaide Hospital, October, 1889.

Patient died of septic peritonitis, after an operation performed on account of symptoms of partial intestinal obstruction. A communication between the cyst sac and the colon had been diagnosed, as patient had previously passed hydatid membranes by the bowel. It was found that the sac wall was represented by a calcareous shell of the size of an orange, with an opening where its cavity communicated with the colon.

CASE VIII.—ILLUSTRATING THE OCCURRENCE OF SMALL ABSCESSSES IN THE LIVER NEAR THE HYDATID SAC.

Louisa S., *æt.* 24, Adelaide Hospital, December, 1889.

Patient died of pneumonia twelve days after thoracic section for a suppurating hydatid of the right lobe of the liver. At the autopsy it was found that the adventitious sac had disappeared by ulceration; that the surface of the hydatid cavity was stained of a deep pea-green colour, and that about half-a-dozen abscesses had formed in the liver substance in the immediate neighbourhood of the cavity. They had smooth walls, contained pale muco-pus, and were no larger than peas.

PROCEEDINGS OF BRANCHES.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY meeting held at the Adelaide Hospital, on 29th August, 1895. Present—The President, Drs. London, Stewart, A. A. Hamilton, Poulton, Clin- dening, H. H. Wigg, Stirling, Evans, Hayward, J. A. G. Hamilton, Todd, Corbin, W. A. Verco, Fischer, Giles, C. Magarey, Irwin, Moule, Oudmore, and hon. sec. (Dr. Swift).

Dr. LONDON read a paper on a case of castration.

A CASE OF CASTRATION FOR ENLARGED PROSTATE.

By ALFRED A. LONDON, M.D. (LOND.), LECTURER ON FORENSIC MEDICINE AND ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

WM. T., aged 82½ years, appears to have had some symptoms of enlargement of the prostate for several months prior to February 11th, 1894, the date on which he first had retention of urine; subsequently he constantly required the use of a catheter, and chronic cystitis was set up. On December 2nd his condition was truly pitiable, and he seemed almost worn out with want of sleep, owing to the constant necessity for relieving himself with the catheter. The following day, at the Private Hospital, with the assistance of Drs. Poulton and Shepherd, I inserted a drainage tube into the bladder through the perinæum, and about a week later (December 11th) double orchotomy (to use Mr. Mansell Moullin's term) was performed. There was no shock, and the wound united by first intention. Drainage and washing out of the bladder were persevered in for nearly three weeks. The patient rapidly regained strength, and the cystitis had practically disappeared by January 1st, 1895. At first he passed his water at frequent intervals, and in small quantities, but in a few days he was able to retain it for about four hours, passing as much as 9 ozs. on one occasion. It was difficult to estimate, when he left the Hospital, whether there was any reduction in the size of the prostate, but he never again required the use of a catheter. About a couple of months later he succumbed to an attack of erysipelas of the leg. I believe this to be the oldest patient who is recorded to have successfully undergone castration for this purpose.

Dr. POULTON mentioned three cases in which he had performed castration for the dysuria of prostatic enlargement, as follows:—

I. A. S., *æt.* 61, married. Dysuria for years; latterly very great frequency of micturition, and nocturnal incontinence. Came to hospital on March 29, 1895,

with complete retention. Catheterised for a week, and then allowed to go home, still unable to micturate, but able to pass a Jacque's catheter. Re-admitted May 14, complaining of needing to use his catheter very frequently, and increasing nocturnal irritation. The urine is acid, and contains no pus. The prostatic projection *in recto* resembles a walnut.

May 18.—Orchectomy.

May 26.—Passed urine voluntarily for first time since operation.

June 2.—Urine neutral; feverish; bladder irrigated with Boracic lotion.

June 9.—Urine acid; micturition still frequent.

June 15.—Micturition unimproved; prostatic decidedly smaller and softer.

July 13.—Still passes urine very frequently; is not using a catheter regularly; residuum four ounces, acid; prostate decidedly smaller.

August.—General condition much improved; is employed as messenger at the Destitute Asylum.

II. D. McL., *et. 73*. Admitted April 13, 1895. Three weeks ago a surgeon drew off his water for retention, and since then the patient has been using a catheter every time he wished to micturate. Failing to pass his instrument two days ago, he suffered retention for thirty-five hours, and was relieved by his medical attendant. Urine 1015, acid, clear, a large ring of albumen; prostate greatly enlarged. Catheterised regularly for five days, at six-hour intervals; when, a definite cystitis having declared itself, with very considerable pain, a perineal section was done, and a tube inserted into the bladder. There was no improvement; bladder pain continued. The scrotum became cedematous; double epididymitis, with effusion into the tunics, occurred; the patient became almost uncontrollably restless, and the perineal tube could not be retained. There was a considerable degree of pyrexia, and his general condition was grave. I very much feared scrotal cellulitis. Four weeks after the perineal section, the intensity of the cystitis having subsided, he was out of bed and able to micturate voluntarily through the wound; but, having very considerable frequency and dysuria, and the prostate being about the size of a mandarin orange, orchectomy was done on May 15.

June 9.—Patient gaining strength rapidly; able to micturate easily.

June 15.—Prostate feels decidedly smaller, especially on the left side, and is of firmer consistence than before; retains his power of micturition, and has not used a catheter for three weeks.

August 27.—Writes, "If I don't get any worse than I am, I shall not have any reason to complain for the rest of my life."

III. P. K., *et. 60*; admitted April 2, 1895. Retention of two days' duration, following exposure to cold and wet. The bladder is distended, and contained 40 ounces of urine. The prostate is palpably enlarged; temperature 100.2°. The urine was drawn off at regular intervals daily for six weeks, and, no improvement following the exhibition of ergot and strychnine, during this time both testes were removed, the prostatic enlargement being about the size of a walnut. (May 13). He left the hospital in a week, but was unable to micturate voluntarily for 15 days after the operation, when he regained some degree of power, but was unable to empty his bladder completely. Five weeks after the orchectomy the residuum was four ounces. At the expiration of three months the residuum was one and a-half ounces, and the prostate, as felt through the rectum, was diminished in size.

Dr. SWIFT read a paper on—

THREE CASES OF ACUTE OEDEMA AND PROLAPSE OF THE CERVIX OF THE GRAVID UTERUS.

By H. SWIFT, B.A., M.D., CANTAB.

In the "Epitome of Current Medical Literature," in the *B. M. Journal* of July 20, 1895, I notice a paragraph headed "Oedema and Prolapse of Cervix in Pregnancy and Labour." It says:—"Geyl describes a second case of this rare condition, seen in his own practice. Five have already been collected by Guéniot, the discoverer of the disorder in question, and one by Misrachi, and thus eight cases complete the series." I was not aware that this condition is such an uncommon one, nor can I believe that it is, but rather would conclude that the cases have not been reported. I have seen three cases during the last four years. The first was that of Mrs. B., Adelaide, to whom I was called in September, 1891. She thought she was three months pregnant, and had always been strong and well. On the morning of the day I saw her she had a bearing-down sensation, and felt something in the "passage." This sensation increased during the day, and in the evening she had intermittent pains in lower part of abdomen. I found the cervix elongated and very cedematous, and protruding through the vulva, the visible part being quite three inches across. There was a slight sanious discharge. I easily replaced the cervix, and ordered rest in recumbent position. During the night a three-months fetus came away. After the convalescence, which was quite satisfactory, I lost sight of her.

That same night I was called out of bed to see Mrs. F., who was five months pregnant. She had always enjoyed good health, and had had one child previously, the confinement being easy and natural. She complained of "falling of the womb," which had come down in the afternoon. The cervix was tremendously elongated, cedematous, and protruding through vulva; no pains, no discharge. I easily reduced it. She kept in bed two days, and had no trouble again during that pregnancy. Labour was easy.

Mrs. M. consulted me in January of this year, saying her womb was down, and that she had a good deal of smarting. I found the cervix outside the vulva, very cedematous, and excoriated in several places from chafing. She was six months pregnant. I replaced the cervix at the time, but it would come down upon the slightest exertion. I tried several different kinds of pessaries, but all to no purpose, so that she had to spend the greater part of her time lying down, a T bandage, with a pad of wool, giving her a certain amount of

support. She went to full time, the cervix softened quickly, and the os dilated easily, so that labour was in no way impeded, although I had anticipated trouble, considering the amount of swelling and continual irritation from chafing and excoriation.

In the first case I was at a loss to make out the condition of affairs by tactile sensation alone, but upon inspection I was at once enabled to recognise the os, and then to trace up the elongated cervix to the uterus. After the lying-in period was over, the elongation of the cervix was not nearly so perceptible, but in Mrs. F. it was still marked. She would not consent to an operation, but wore a ring pessary, which kept the uterus in position so well that she again became pregnant. There was no prolapse of cervix during pregnancy, and she was confined last month. In Mrs. M., although the cervix resumed its normal size and length, still the uterus is very low in the pelvis, and it was only yesterday (August 27th) that she came to see me, complaining of it being down again; so that some operation, probably ventral fixation, will have to be performed to allow her to get about with any degree of comfort. I cannot find that this condition is mentioned in our textbooks. Barnes certainly mentions hypertrophic elongation of the cervix uteri as a cause of dystocia, but then the hypertrophy was of old standing, and had existed before pregnancy. Playfair and Spiegelberg also speak of the same condition. In these cases labour is generally very much delayed and difficult, owing to rigidity and non-expansion, but in acute oedema of the cervix labour is evidently not retarded. In my first case I had had no occasion to examine her, nor had she complained at all of anything abnormal, so I do not believe she had any hypertrophy of the cervix. In the other two I am quite sure there was no abnormality.

Dr. LENDON exhibited a case of post hemiplegic atelosis in a child *æt.* 10 years.

Dr. SWIFT showed a child, *æt.* 4, who was admitted to the Children's Hospital in November, 1893, suffering from left hip disease. The joint was opened; bare bone was found both on the femur and acetabulum. Cavity was well scraped and flushed, and stitched up. The wound did not heal by first intention, so a month after the sinuses were scraped out again. Gradually the wound healed. Whilst in bed the child had an attack of infantile paralysis, affecting the right leg; but after prolonged massage the child can now walk about fairly well, without the aid of crutches or supports. There is much shortening in left leg, but a fair amount of movement is present in hip-joint.

Also, a boy, *æt.* 10, who had been under treatment for a year with hip disease. Joint had been opened; head of femur and rim of acetabulum were bare. The joint was well scraped and flushed, and wound stitched.

Wound broke down and discharged for two or three weeks, but is now healed, and boy can walk well.

Dr. SWIFT also showed a boy who had had a very acute attack of, probably, osteo-myelitis in two bones, viz., femur and clavicle. The child was so ill that his life was despaired of. He rallied, however. The inner half of clavicle was removed, the hip-joint was scraped out, and small pieces of dead bone removed. He is now, after two years, getting about well.

Also showed a girl, *æt.* 10, who had been under treatment for congenital ichthyosis. She first came under observation two years ago, and was treated with thyroid tabloids with great benefit. She then left off attending. About two months ago she visited me again, almost as bad as ever. In the Children's Hospital she recommenced the thyroid tabloids, and at once began to improve, and is now almost quite well. She is taking nine five-grain tabloids daily. At first she lost weight and looked quite ill, although taking one tabloid twice a day. She is now in very good health.

Dr. J. A. G. HAMILTON showed a child, aged three years, on whom he had operated on for cleft palate, seven weeks ago. The cleft had completely united by the one operation.

The operation was a rather difficult one, as the cleft was an unusually wide one, and extended arterially right up to the alveolar margin; and the mucous membrane was stretched very tightly over the borders of the hard palate. The muco-periosteal flaps were brought together with silk-worm gut and horsehair.

Dr. J. A. G. HAMILTON showed viscera removed from a woman who had died after operation for a large abdominal tumour, presumably ovarian cyst. It was found to be a large hydatid cyst springing from anterior margin of liver, communicating by a small opening with a second suppurating cyst, which was closely adherent to the fundus of bladder. The large cyst burst during manipulation; peritoneal cavity was copiously douched and Keith's drainage tube inserted. Patient never rallied.

Dr. LENDON exhibited a nail, measuring $1\frac{1}{4}$ inches in length, which was swallowed by a boy nine years old, and passed on the 8th day. There was no symptoms.

Minutes of meeting of July 25th, and of special meeting of August 22nd, were read and confirmed.

Hon. Sec. explained that paragraphs in daily papers re special meeting had not been inserted by him, nor did he know who had inserted them. He thought it was very irregular for the paragraphs to have appeared at all, and especially without the cognisance of the Council. Several members deprecated the publishing of the Branch's transactions in the lay press.

The hon. sec. explained that the Council proposed to alter the existing arrangements in regard to the clinical department, as too much time was lost in exhibiting some cases to the exclusion of others, and also on the exhibits. Cards were to be provided to be attached to the exhibits. Upon these a short summary of the points of interest was to be legibly inscribed. A list of the exhibits would be put up in the large connecting-room; members would see the list, and then be able to go and examine any case that was of special interest to them in the adjoining room.

Dr. STIRLING brought before the Branch the matter of the medical library, and explained that the subscriptions had decreased to such an extent that it was impossible to continue the serial library unless some remedial steps were taken.

It was proposed by Dr. HAYWARD, seconded by Dr. LENDON,—"That a committee consisting of Drs. Sterling, Verco, and Cleland be appointed to confer with the council in the matter."—Carried.

Dr. Martin being absent, Dr. LONDON read his paper, which was discussed by Drs. Poulton, Giles, Sterling, Clindening, and J. A. G. Hamilton.

On the motion of Dr. CORBIN, the discussion on Dr. Swift's paper was postponed.

A SPECIAL MEETING of the South Australian Branch of the British Medical Association was held at the Adelaide Hospital on 22nd August, 1895. Present—The President, Drs. Lendon, J. A. G. Hamilton, Poulton, Perks, Sterling, Cleland, Morris, Teichelmann, Martin, J. C. Verco, Hayward, Corbin, Giles, Archer, A. A. Hamilton, H. H. Wigg, Michie, Harrold, Hone, Robertson, C. Magarey, M. von Lukowitz, Lawrence, Leschen, Symons, Evans, Way, and hon. sec. (Dr. Swift.)

Dr. POULTON proposed, "That by-law 9 should be suspended." Dr. CLELAND seconded.—Carried.

Hon. Sec. read requisition calling meeting, signed by Drs. Poulton, J. A. G. Hamilton, Martin, Giles, Stewart, and Robertson. Dr. Poulton explained reason for calling meeting.

Hon. Sec. read letters from Drs. Drummond, Allwork, A. Smith, Popham, Glynn, R. Stewart, O. Smith, Robinson, Brummilt, and Sangster sympathising with the Board and hon. staff of Hospital. Telegram from Dr. Minchin.

Dr. MORRIS moved,—"This meeting of the South Australian Branch of the British Medical Association desires to express its entire approval of the attitude adopted by the Board of Management of the Hospital during the recent trouble with the nursing staff. The reinstatement of Nurses Hawkins and Graham would, in its opinion, be strongly antagonistic to the maintenance of proper order and discipline, and consequently injurious to the interests of the patients."

Dr. ARCHER seconded.

Supported by Drs. Lendon, M. von Lukowitz, Corbin, Teichelmann, Leschen, Hayward, and Cleland. Carried unanimously.

Dr. WAY proposed,—"This meeting desires to place on record its high appreciation of the valuable services of Dr. Perks in his position as Medical Superintendent of the Adelaide Hospital, and its strongest sympathy with him in the gross and unfounded charges made against him in the evidence of certain witnesses before the Royal Commission."

Dr. GILES seconded.

Supported by Dr. Poulton, Michie, J. A. G. Hamilton, Archer, and the President. Carried by acclamation.

Dr. PERKS returned thanks.

Dr. STERLING, in the name of himself and colleagues on the Board, thanked the meeting for the resolution.

Dr. LONDON proposed, and Dr. A. A. HAMILTON seconded,—"That both the resolutions should be presented to the Board of Management by the President."—Carried unanimously.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE usual monthly meeting of the Branch was held on Friday, 30th August, 1895, at the Royal Society's Room, Sydney. Present: Dr. E. J. Jenkins (President), Drs. Knaggs, Todd, Fiaschi, Schrader, Dowdell, Lyden, Pentland, Fieldstad, Wilkinson, Sydney Jones, Tidawell, Crago, Pockley, Weekes, Clubbe, Litchfield, G. A. Marshall, Neill, Cohen, O'Hara, Bennet, Wood,

MacSwiney, Scot Skirving, McDonagh, Thring, Goode, Pickburn, J. A. Dick, Gore Gillon, Jamieson, Mullins, Bowker, McLeod, Kendall, Colpe. Visitors: Dr. Clendening (London), Dr. Macdonald (Toowoomba).

The minutes of the previous meeting were read and confirmed.

The PRESIDENT (Dr. Jenkins) said:—"At the last meeting he announced the fact that our then secretary, the late Dr. Huxtable, was in a critical condition, suffering from diphtheria complicated by pneumonia. All now knew that on July 30th he passed quietly away. He looked upon his loss as a calamity—the greatest to the profession since the death of Dr. Fortescue. For this Branch he worked with untiring energy and enthusiasm, and the good that he did would live after him. From a practically comatose, he roused us to an active condition, and to his efforts we had become the largest Branch of the B. M. A. outside the United Kingdom. It is not his intention to-night to say all he would like to say of one who was held in such high esteem, not only in this, but in the other colonies. (Here the President read extracts from a letter of Dr. David Grant and Dr. Springthorpe, of Melbourne, and from the secretary of the Adelaide Branch.) His place will be difficult to fill; but he took this opportunity of informing them that Dr. Thring had been elected hon. secretary, and that in his hands the arduous work would be carried on, he had every reason to believe, with the utmost satisfaction.

Dr. CRAGO said: As one who was intimately associated with the late Dr. Huxtable, and was in frequent consultation with him regarding the affairs of the Branch during the whole time of his secretaryship, he craved permission to add a few words to what the President had said. Members could hardly imagine the amount of time and thought the late Secretary devoted to the interests of the Branch during last year; for, in addition to the routine business of the Branch, numerous interviews had to be held with Mr. Bruck; a lengthy correspondence had to be carried on with members of the profession in the adjacent colonies, in order to obtain their co-operation in the *Australasian Medical Gazette*; numerous circular and other letters had to be indited, with a view to increasing the membership; and in many other ways in connection with the incorporation of the Branch and the purchase of the *A.M.G.*, the calls upon his time were very great; so that when the last stage of the purchase of the *A.M.G.* was completed, he was proudly able to say that "it represented his year's work." Dr. Huxtable was a man who was not easily turned aside from any object he had in view by any obstacle—however formidable it appeared—and such a word as "cannot" was not found in his vocabulary. During the early part of last year, the obstacles in the way of carrying out the scheme for the purchase of the *A.M.G.* seemed insurmountable to some of us; still, with true British pluck, Dr. Huxtable never despaired, and finally every obstacle was removed. He was a man of strong and decided views, and one who fearlessly expressed his opinions, so that it was inevitable that he gave offence to some. Still, there are few who would not admit that his aims and motives were pure, and that he was actuated solely by a desire to raise the status of the profession to which he belonged; and in his great efforts to advance the interests of this Branch, it was with the hope that it would embrace practically the whole of the profession of the colony, and so become a body powerful to redress wrongs, and one to be looked to as the custodian and upholder of the dignity and best interests of the profession. Dr. Crago concluded by reading the following letter:—

"Wickham Terrace,
"Brisbane, 22nd August, 1895.

"Dr. Crago, Sydney.

"My Dear Sir,—I see by the *A.M.G.* that a fund has been started for erecting a monument to the late Dr. Huxtable. I am very pleased at this, and had hoped that a memorial would be raised.

"Please find enclosed my cheque for one guinea.

"In Dr. Huxtable we have lost one who possessed all the most valuable qualities of our profession. I am proud to have numbered him amongst my friends, but it is not so much for that reason that I would join in a monument to him, but far more because he demonstrated by his conduct and behaviour that he could sink himself in the interests of his profession, and that he was entirely above being actuated by personal or petty feeling when the general good was at stake.

"In doing honour to Dr. Huxtable's memory we honour ourselves by showing recognition of one who was in the highest sense a man, a gentleman, and a physician.

"Yours sincerely,
"D. LOCKHART GIBSON."

Dr. WILKINSON exhibited a patient suffering from persistent dropping of fluid from the nose.

Dr. GOODE asked how long the dropping had lasted, and if there was any history of injury to the head of the patient.

Dr. WILKINSON said the dropping had lasted for about eight months. There were no previous symptoms, and as far as he could find out there had not been any history of injury to the head. The nature of the disease was very obscure. It was no doubt lymphatic. It was rather singular that, wherever mentioned in the text-books, the disease was described as "persistent dropping of fluid from the nose." It was never mentioned by any specific name. Another point was that the flow was always from the one nostril.

Dr. SYDNEY JONES said that he always understood that the flow was more or less intermittent, and always from one nostril. It was difficult to understand why the flow should be of an intermittent character. Of course, in cases of old age, where there was decay of vision, a flow of the character was frequently found. The disease was certainly very obscure in its origin.

Dr. CLUBBE read a paper on seven cases of laparotomy for intussusception in very young children.

SEVEN CASES OF LAPAROTOMY FOR INTUSSUSCEPTION IN VERY YOUNG CHILDREN.

By O. P. B. CLUBBE, L.R.C.P. LOND.,
M.R.C.S.E., Hon. Surgeon Sydney
Children's Hospital.

THE seven cases of intussusception in which laparotomy was performed that I wish to bring before your notice to-night all occurred in very young children, not one of them being over six months at the time of the operation.

The first six cases were in the Children's Hospital, and four of these recovered. The last was at P. A. H., and it died after living four days.

I will briefly relate the cases in the order in which they occurred.

CASE I.—Richard C., aged six months; admitted to C. H. August 24th, 1893. Has been vomiting, and has passed nothing but blood and slime since last night. The child was somewhat collapsed. There was an elongated tumour on the left side of abdomen, and by rectum a mass could be felt. Under C.H.U. Warm oil was injected, and this had the effect of pushing up the mass, so that it could no longer be felt, and also of reducing the size of the tumour in abdomen. As it was clear reduction had not taken place, laparotomy was performed at once. The tumour was found at the splenic flexure of the colon, and was of cæcum and ascending, and part of transverse colon. It was reduced easily enough by squeezing until cæcum was reached, and this only unfolded itself after a considerable amount of coaxing. So much pressure had to be put on the intussusceptions that the serous coat of the bowel was torn in two or three places. The cæcum and vermiform appendix were very dark in colour, and felt hard. There was some little difficulty in returning the small intestines. Soon after the operation 1gr. morphia was given to the child hypodermically.

August 26th.—The child doing well. Has had two motions, slightly blood-stained; vomited, but very little. I will not weary you with the subsequent history of the case. The recovery was interrupted by a pneumonia at right base on the fifth day after the operation, but in spite of this the child ultimately got quite well. I showed this child at one of the meetings of this Branch in Oct., 1893.

CASE II.—Ida C., aged four months; admitted to C. H. Sept. 19th, 1894. Said to have been quite well till yesterday, when it suddenly turned white, drew up its legs, and screamed; afterwards attempted to vomit; passed blood and slime by bowels, and has been passing this frequently since; seems to be in less pain to-day.

A well-nourished, vigorous child; abdomen not distended; it is doubtful if there is pain on palpation; no tumour to be felt, and nothing by rectum.

At 4 p.m. had an anæsthetic; abdomen palpated without anything being felt; child inverted, and large enema given.

Sept. 20th.—The child in same condition; laparotomy at 4 p.m.; cæcum found in colon, about three inches, reduced without difficulty; cæcum much congested. There was great difficulty in returning the small intestines, and the abdominal wound had to be enlarged.

The child died at 3 a.m. on the 21st, 11 hours after operation. T. 105° just before death.

CASE III.—John L., six months; admitted to C. H. Oct. 10th, 1894. The child was taken

suddenly ill last night; was given some castor oil, and vomited; then began to pass some blood; child has been straining all day.

Child well-nourished; does not look very ill; abdomen slightly distended; no tumour to be felt; nothing per rectum. Under an anæsthetic a large enema was given, and considerable pressure was put on; the oil returned as it went, and some blood and mucus followed; no pains. Laparotomy was proceeded with at once. There was some fluid in the abdominal cavity. The intussusception was found on the right side, and was the cœcum into the ascending colon. It was reduced in the usual way by squeezing, without much difficulty. The child vomited a good deal for the first few hours after the operation; passed a motion 12 hours after; the child did well till Oct. 16th, six days after operation, when, as there was a good deal of redness of skin caused by dragging of deep sutures on each side of wound, some of these were removed.

Oct. 17th, 24 hours afterwards, when the child was straining or coughing, about three inches of gut came through the wound. This was returned as soon as possible, and the opening plugged with gauze. About an hour afterwards, under an anæsthetic, the wound was opened up, and the peritoneum was brought together again in the usual way with deep (silk-worm gut) sutures.

After that the child did well, and was discharged cured Nov. 26th.

CASE IV.—Irving C., aged four months; admitted to C. H. December 9th, 1894. The history was that three days before admission the child had cried with pain. Soon afterwards it began to pass blood, and had been vomiting constantly. No definite tumour to be felt in abdomen by palpation. A mass could be felt in rectum. Under an anæsthetic, a large enema of oil was given. On opening the abdomen, which was done at once, the cœcum, ascending transverse and descending colon were found in the rectum. It was reduced with difficulty. The cœcum was very congested, and quite hard. After reducing the intussusception there was a very great difficulty in returning the small intestines to the abdominal cavity, because they were so much distended. The gas from some of these distended coils was let out by means of a hollow needle. The puncture wound was caught by fenestrated forceps, and tied with fine catgut. The child did not rally after operation, and died in three hours. Passed a large motion without blood just before death.

CASE V.—David D., aged four months; admitted to C. H. December 20th, 1894. The history was that the child had had some diarrhoea on the previous day. The motions were green,

and contained caries. At 10 p.m. it had refused the breast, and became restless, and cried as if in pain. Oil was given by mouth, and an injection of soap and water. The motion that resulted was streaked with blood. It has vomited several times, and keeps passing blood.

On examination.—The child was fairly well nourished. Does not seem to be distressed. There is some resistance in the left iliac fossa, and a mass can be felt by rectum. Under chloroform, a definite, sausage-shaped tumour on the left side of abdomen was easily made out.

A large injection of oil was given, and this evidently partially reduced the intussusception, for the tumour became much smaller, and could now be felt in region of transverse colon. On opening the abdomen the tumour was found in the transverse colon, and was reduced with difficulty. The cœcum was very dark, and felt hard. *Ti. opii.* in drop-doses was given soon after operation, and in the first eight hours the child took eight drops. This was given because the child was restless, and seemed to be in pain. No vomiting.

December 28rd.—Child had two good motions after calomel gr. i. From this time it slowly convalesced, and was discharged March 5th, 1895.

This child has been suffering from marasmus more or less ever since, and has been readmitted in order that it may be properly dieted.

CASE VI.—Reginald P., aged five months. This child was brought down to my home from Bowral on the afternoon of April 19th. The history was that four days ago it had an attack of diarrhoea. Last evening it was suddenly seized with vomiting, and blood and slime appeared in the motions. The mother thought it had dysentery. The child was fairly well nourished. It looked ill, but was not collapsed. I could feel a sausage-shaped tumour on right side of abdomen. I sent it at once to the Children's Hospital. a large enema of oil was given, but it did not reduce the intussusception.

On opening the abdomen the tumour was found in the right side, and was reduced easily. The vermiform appendix had been so much pinched that I removed it.

This child made a quick recovery, and was discharged May 5th, 1895.

CASE VII.—Thomas Holmes, aged four months; admitted to P. A. H. June 5th, 1895. History: Said to have had a sudden attacking pain two nights ago. Has been passing blood and mucus by bowels.

On examination of abdomen, an elongated tumour to be made out on left side, by rectum most to be felt.

Abdomen opened in middle line. Colon from cecal valve found to be intussuscepted; reduced easily. All the small intestine was collapsed. In this case no enema had been tried before section, and on this account there was a little trouble in getting behind the mass in the rectum, to begin the squeezing process. This was got over by getting an assistant to pass his finger into the rectum to push the mass up a little. After the operation the child was somewhat collapsed, but picked up during the evening. It had three motions during the night. This child seemed to be doing well for three days, then began to fail, and died on the evening of the fourth day. At P.M. there was some slight peritonitis and intriktion. The cœcum was somewhat discoloured. The greater portion of the small intestine was collapsed.

In the *Lancet* for August 11, 1888, Mr. A. Barker has a paper on Intussusception. (Whenever this subject has been written about or discussed since that date this paper has been referred to). Mr. Barker collected 78 cases that had been treated by laparotomy; 60 died, and 18 recovered. In only 84 of these cases could the bowel be released. Twenty-three were children, 5 recovered, and 18 died; 11 were adults, 7 recovered, and 4 died. So that in children the mortality was very much higher than in adults—78·2, compared with 26·3. Up to that date, then, only five children were known to have recovered after this operation.

In going through the *Lancets* and *British Medical Journals* since Mr. Barker's paper, I can only find records of eleven recoveries in children from laparotomy for intussusception. One of these was done in Melbourne by Dr. Snowball, and the other in Tasmania by Dr. Percival. The percentage of recoveries in my cases compares favourably with any that have hitherto been recorded. So far as they go, they are encouraging, and they are a proof, if proof be wanted, that very young children are able to bear the shock of an abdominal section. Should we do laparotomy in these cases? The writer on intussusception in the "American Text-book of Diseases of Children, 1894," says no. "In cases of acute intussusception," he says, "it has no effect in diminishing the death-rate. The objections to the operation in acute cases are that there is a reasonable chance of recovery without it, and that at the early age at which intussusception usually occurs renders operative interference peculiarly dangerous."

He goes on to say, "I am well aware that a few brilliant results from laparotomy in infants have been recorded by Mr. Hutchinson, and the late Dr. Sands, of New York, and other operators,

but these cases should be regarded as surgical curiosities, showing what infants may sometimes safely endure, rather than as furnishing precedents for future guidance."

Every now and again these cases of intussusception are certainly reduced by rectal injections of either oil, water, or are given with an ordinary enema syringe. Many such cases have been recorded. I had a case only a few weeks ago at the Children's Hospital that was reduced in this way. But we must always remember that there is an element of danger in these rectal injections. It is very difficult to regulate the amount of pressure we put on the gut, and if it is weakened at any point by ulceration it may give way. Mr. Harry Zinwick records such a case in *British Medical Journal* of May 5 of this year. The child was six months old, and was admitted to London Hospital, March 15, 1895. A sausage-shaped tumour could be felt in the left lumbar region, and a mass could be felt in the rectum, high up. The child was placed under chloroform, inverted, and turned somewhat to the right. A small, soft rectal tube, with funnel attached, was used, and the drop employed to distend the colon was never more than three feet. Three pints in all were injected, a pint at a time, the colon being thrice distended and allowed to relieve itself. After the third distension the intussusception could no longer be felt. As the child recovered from the anæsthetic only a portion of the last enema returned. In a quarter of an hour the intussusception could again be felt on the right side. The child died in an hour.

P. M.—A considerable quantity of gumous fluid was found in the peritoneal cavity. The intussusception was not fully reduced. There were two ulcers in the transverse colon. One had caused loss of substance down to the peritoneal coat; its floor was formed by a thin, white cicatrix the size of a pea. The other had been apparently very similar, but its base was more perforated, and replaced by a clean-cut hole. In this case there had been no history of "consumptive bowels," or chronic diarrhoea.

The operation itself is easy, and should, I think, certainly be done in all cases, no matter how young the child is, if we are certain that we have an intussusception that has not been reduced by the rectal injections. If the injections fail, *proceed at once* to the operation. Delay is fatal.

In Case No. 2 the child might have lived if I had operated at once, instead of waiting twenty-four hours. The difficulty in this case was that no tumour could be felt by abdominal palpation, even under chloroform, so that I could not be sure whether the intussusception was reduced or not

without waiting to see if the symptoms abated. The next day the child was still vomiting, and passing nothing but blood and slime. So the operation was proceeded with, but the child died. In such cases it seems to me impossible not to err sometimes.

In none of these cases was a drainage tube used. In some of them the intestines were washed with warm lotion. Opium in some form was given to all of them for the first 24 hours. For the first 12 hours nothing but water was given. After that, Mellin's food and water for a few days, and brandy if necessary.

The after-treatment of these cases is very important, and skilful nursing has, I feel sure, a great deal to do with bringing them to a successful issue.

The PRESIDENT (Dr. Jenkins) said all the members must congratulate Dr. Clubbe on the very successful results of his cases. There was no doubt that careful nursing was a very great factor in the success of these cases, and this the patients had had at the hands of the sister in charge of the ward at the Children's Hospital.

Dr. ACKLAND O'HARA said he had a case of this character under his care. The tumour could not be reduced without operation. Dr. Scot Skirving operated in the case. The child was only three months old when operated upon.

Dr. SCOT SKIRVING said he had opened the abdomen certainly three times, and possibly on four occasions, in children under one year. All these operations, save one, were to relieve intussusception. The exception was that of an infant of five months old, who was found to have a hernia into the foramen of Winslow. This was reduced with infinite difficulty, but the child died in a few hours. The only other instance of this lesion he had seen was in the case of an elderly practitioner, where the hernia could not be reduced at the operation, and only with great difficulty on the *post-mortem* table. Only one of these three or four babies recovered. It was the case just mentioned by Dr. Ackland O'Hara. This child was barely three months old. Its symptoms had lasted about 48 hours. There was no tumour in the rectum, and no very definite abdominal mass to be felt. He opened the abdomen, and the intussusception was fairly easy to reduce, except at its last portion. He wished to call attention very specially to the enormous hardening and thickening of the tissues at and around the ileo-cæcal valve in this case. So great was this intumescence that it appeared to him and to those present like an actual tumour, and narrowly, but happily, escaped being dealt with as such. The convalescence of the case was interrupted on the 9th day by the abdominal incision giving way, with gross prolapse of the bowel. A second operation for suturing the parietes was performed, and the child then made a complete recovery.

Dr. GORE GILLON said he had a somewhat similar case some two months ago. The child was six months old. He (Dr. Gillon) was called to see the child at 9 o'clock at night. He again visited at 8 o'clock the next morning, and noticed the swelling get larger. At once gave an injection of oil, and afterwards opened up the abdomen. The intussusception was very difficult of reduction. The child rallied after the operation, and

seemed to be doing very well, but at 8 o'clock the same evening news came that the child had died.

Dr. CRAGO said his experience of operation for intussusception was limited to one case. The child was eight months old. The tumour was felt through the rectum. The patient was taken to St. Kilda House, and Dr. MacCormick operated. The intussusception was reduced by gradual pressure from below. The child lived some hours after the operation, but gradually sank and died. Another case with all the symptoms of intussusception was brought to him one morning at six o'clock. He inverted the child, and passed his finger into the rectum, but could feel no tumour. He ordered a mixture of opium and belladonna, and made arrangements for a laparotomy at nine o'clock, but by that time the symptoms had disappeared, and the child recovered. He would like to ask Dr. Clubbe if his experience bore out the point mentioned in some surgical works that it should be reduced by pressure and squeezing from below, rather than pulling from above?

Dr. WILLIAM CHISHOLM said he had one case under his care, but the symptoms had lasted a week before he was called in. The child's abdomen was very much distended. The patient was operated upon, and it was found very difficult to reduce the last two inches of the intussusception. The child died the following morning. This case was not a fair criterion, as the symptoms had been allowed to continue too long before being attended to. It was really remarkable how much a young child could stand. Cases of intussusception were very difficult and trying to the medical attendant.

Dr. GOODE said the whole success of the operation was getting it done early. After 48 hours it made it very much more difficult to reduce the tumour. Every means should be exhausted to reduce the intussusception by injection before resorting to operation. The last case he (Dr. Goode) had he treated by injection of air. The tumour could easily be felt; it was about four inches long. Care must be taken in using the injector so as to prevent the nozzle from penetrating too far. In the case mentioned he (Dr. Goode) had used a Higginson's syringe, and he had some difficulty in withdrawing it.

Dr. SPENCER said he had reduced one case of intussusception by an injection of air.

Dr. THRING congratulated Dr. Clubbe on his success, for, although the condition was not an uncommon one, successful operation for its relief was. The reason for this was to a great extent due to delayed or mistaken diagnosis, and hence delay in adopting the necessary operative measures. Rectal injections of air or water should certainly be tried first; but, failing reduction, prompt operation was necessary. Rapidity of operation, and avoidance of unnecessary manipulation, was of the greatest importance in these very young children. The difficulty of returning distended intestines might be overcome by drainage of the gut, after Greig Smith's plan. As to after-treatment, the less interference for the first twenty-four hours the better. If, owing to adhesions, or thickening and infiltration about the cæcum, it was impossible to effect reduction, then the question of re-section of the gut would come up, and, with the aid of Murphy's button, success was much more likely than hitherto.

Dr. SYDNEY JONES said that he thought injections of sterilized water were better than anything else as injections. He (Dr. Jones) suggested that perhaps in the cases where there was an appearance giving rise to that of tumour it might possibly arise from polypus in the intestine.

Dr. CLUBBE said that there were cases recorded of polypus in the intestine. No doubt sterilized water would suit as injections for reducing the intussusception. In the one case, where the cæcum, which was intensely hard, had been opened, the child had died. There can be no question the reduction should be done by squeezing, and not by dragging on the parts. Young children cannot stand a long operation, therefore rapidity of operation should be attended to, and therefore re-section would not suit. He never gave opium unless obliged to do so. For the first twelve hours after the operation only water was given; after that a little Mellin's food. Had tried mother's milk in some cases, but it had been found not to suit. To Sister Gardiner, who had nursed these cases, a great deal of praise was due, as she certainly did not spare herself in any way, and to her good management a large amount of the success achieved was due. In cases of intussusception the practitioner should be careful in the diagnosis, as so much depended upon a correct and early diagnosis of the case.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting was held at the Austral Salon on Wednesday, July 28th, at 8 p.m. Present: The President (Dr. Snowball), in the chair, and Drs. F. Meyer, C. P. Dyring, C. Ryan, A. J. Wood, J. Andrew, J. R. M. Thomson, Hamilton, Mullen, Kent-Hughes, Hamilton-Russell, Cuscaden, O'Hara, Cunningham, Harricks, Kenny, Springthorpe, Green, Cole, Black, Officer, Syme, McKenzie and A. V. Anderson. The minutes of the previous meeting were read and confirmed.

EXHIBITS.

1. Dr. C. P. DYRING exhibited the patient with abdominal enlargement shown by him at a recent meeting. As the result of remarks previously made, he had put him on thyroid extract, with a gratifying result. His girth at the umbilicus was now some two inches less, and the various tumours of the superficial abdomen—lipomata—were also much reduced in number and size. On the previous occasion, after leaving the meeting, the patient could not walk from the tram to his house, a distance of 100 yards, without support. This evening he walked three-quarters of a mile with Dr. Dyring from the latter's house. Previously, on laying the patient down in the room, his breathing became very weak, and he had to sit up almost immediately, whereas now he could, and did, easily lie down.

2. Dr. HARRICKS showed his patient with fracture of the scaphoid, and read the following notes:—

FRACTURE OF THE CARPAL SCAPHOID.—OPERATION.

By F. M. HARRICKS, F.R.C.S.I., SURGEON TO THE ALFRED HOSPITAL, MELB.

E. G., aged 29, a seaman in the Victorian Naval Forces, was, on the 7th January, 1895, standing on a ladder resting against a wall, some 17 feet from the floor, when the ladder slipped, and he fell on his face and hands, the latter in the extended position, the right one receiving most of the concussion on the palmar surface of the carpus. He first came under my care on the 4th of February, nearly a month after the accident occurred. There was then considerable effusion

and thickening round the wrist, and a certain amount of numbness and tingling in the fingers supplied by the median nerve.

As the slightest motion caused pain, under the circumstances the joint was immovable. Up to this date he had been applying wet linen bandages, and had had no fixation. I then placed the forearm on a well-padded Gordon's splint, and in a sling. I saw him about twice a week, and noticed with pleasure the gradual absorption of the effusion. On March 20th this had disappeared, and the bony outlines were fairly distinct. The wrist-joint was absolutely locked, for extension and movement still caused pain, while the numb feeling in the fingers was rather worse. On careful examination, an unnatural prominence was now to be felt on the radial side of the palmaris longus, close to the joint, and at the base of the muscles forming the ball of the thumb. It could also be seen in certain light, and the opinion was formed that it was a displacement of some of the bony structures, and that it required operative interference.

On March 26th, under chloroform anæsthesia, I made an incision (with antiseptic precautions) in the long axis of the forearm, in the middle line, and over the wrist-joint. Having separated the tendons, and drawn aside the median nerve, which was found uninjured, an oval-shaped, smooth piece of bone was exposed, which slightly impinged on the nerve in special motions of the wrist (limited as they were). This was partially loose, and on being raised with an elevator proved to be the inner half of the scaphoid bone, fractured near the centre, and tilted forwards at a right angle from the remaining half. No other osseous structures were fractured, as far as I could see; at all events, the lower extremity of the radius was intact. The other portion of the fractured bone was left *in situ*, and its normal position was apparently not altered. The cavity was irrigated with perchloride solution 1—4000, the wound packed with iodoform gauze, dry dressings applied, and the hand and forearm placed on a back splint. Sensation returned to the fingers the day after the operation, and recovery went steadily on until April 20th, when the wound was completely healed. As soon as the cicatrix had become organized and healthy, massage was employed, which has been continued almost up to the present time, with most satisfactory result.

August 27th.—His grasp is strong, and the joint is quite as movable and useful as ever.

REMARKS.—Apart from the successful ending, the chief point of interest, in a historical sense, of the case which I have brought before your notice is the rarity, if not the entire absence, of any pub-

lished records of a similar injury. We all know how frequently severe injuries occur in the neighbourhood of the wrist—how they produce deformity, and limited mobility—and I am sure that cases occur to every surgeon where the greatest difficulty has been found in arriving at a correct diagnosis of what has really occurred in this region, especially when form and outline have disappeared by reason of inflammatory thickening and œdema. We know how hard it is to tell the exact alteration in the position of the ends of the radius or ulna in impacted and split fractures, and in this very case under review, it was thought that the offending body might be a fragment of the radius driven across the joint. When we take into account the complicated and beautiful arrangement of the carpus, and its relation to the bones of the forearm, it is easy to see how an error may be made. In looking through the pages of various surgical authors, I cannot find one writer who has reported a fracture of the scaphoid bone without a corresponding fracture or fissure of the radius. Sir A. Cooper, in Heath's book, mentions dislocation of this bone with fracture of radius, Holmes & Hulke, fracture of scaphoid with fracture of radius, and neither Erichsen (in his last work), Bryant, Druitt, Treves, or Hamilton mention it at all. The injury is evidently produced by the bone being struck at its waist by the end of the radius driving it against a hard substance.

One fortunate circumstance in this patient's case was the fact of the fragment being sufficiently tilted forwards to be felt. If this had not been so, the correct diagnosis would not probably have been made, and a possibly stiff joint would have added one more to the list of occasionally obscure injuries in this region.

Dr. O'HARA congratulated his colleague upon the result. He had never heard of a similar case. The hand was now as good as if there had been no accident. Dr. C. RYAN then read his paper.

Dr. O'HARA thanked Dr. Ryan for his excellent and instructive paper. It wanted a longer record, however, before we could abandon Lindemann's operation. The Alfred Hospital plan was to cut down, withdraw cyst wall and contents, and pack the cavity with gauze. There was rapid contraction of the cyst wall, and the cavity remained sweet. The risk of biliary influx was fairly great, and in his only splenic hydatid the hæmorrhage was considerable. Thus, this new operation might not be applicable even for all sterile and non-septic cases.

Dr. ANDREW congratulated Dr. Ryan on his boldness and its results. He remembered two cases of hydatid in Douglas' pouch which might have done well, instead of doing badly, had this operation been performed.

Dr. HAMILTON-RUSSELL had certainly not realised the great probability that there was of biliary influx when he had recommended the operation, and was glad that he was not answerable for any fatality. At the same time, the way of least resistance for the bile was through the newly-made scar, and this was

apparent from the cases in which bile had effused, and in which the results were more satisfactory than if Lindemann's operation had been performed. Dr. O'HARA's second objection seemed illogical. He packed with gauze to keep the cavity sweet—it was in such cases that he would not advise the new operation. A word of warning seemed necessary. Whilst the peritoneum had remarkable absorbent power, the cyst-wall had none at all, and one germ might be sufficient to develop in such a culture medium. Hence, if this operation were to be done, we required extraordinary anti-septic precautions.

Dr. SYME regarded the new operation as a marvellous advance in certain cases where the cyst was small, and certainly empty. It was very difficult to be certain on the latter point. He had found, on looking in, some daughter cysts and debris in a cavity that he had felt certain was empty. There was not sufficient evidence yet as to the future of fluid effused into the sac, whether it was absorbed by sac or peritoneum, or made its exit necessarily through the line of incision.

Dr. O'HARA explained that he packed only where there was suppuration, and maintained that the line of least resistance might be through the cut into the peritoneal cavity.

The PRESIDENT congratulated Dr. Ryan more on his caution than on his boldness. The operation represented an enormous advance in small cysts, but Lindemann's remained for suppurating cases and hydatids that could not be perfectly cleaned. As regards leakage, he understood that none occurred until the cyst was as full as before operation, and then certainly the line of least resistance came opposite the scar.

Dr. RYAN, in reply, thanked members for their criticism. His six cases, coupled with five others which he knew of, had all done so remarkably well that they seemed to justify certain conclusions. Where suppuration was present, Lindemann's was the only operation, but where he had to deal with a simple, uncomplicated, healthy cyst he would not hesitate to prefer and perform the new one. As regards influx of bile, though he had never seen so great a discharge as in his present case, there was no evidence of any escape into the peritoneum. Perhaps, even if some did leak in, the presence of aseptic bile might not be of great moment, or lead necessarily to bad results.

Dr. SPRINGTHORPE then read his paper on
THE CONFESSIONS OF A COCAINIST.
REPORTED BY J. W. SPRINGTHORPE, M.A.,
M.D. MELB., M.R.C.P. LOND.

ALTHOUGH we in this newer land have scarcely yet reached the stage in development at which the rarer forms of stimulo-sedatives begin to replace alcohol in the cravings of the neurotic, still there are not wanting indications that our time is at hand, and that before long our community too will be found numbering amongst its waifs and wrecks, not only the morphia maniac and the chloral, but also the sulphonalist, the anti-pyrist, and the cocaineist. It cannot, therefore, be without medical interest to hear from the lips of a devotee, and that devotee a medical man of great mental endowments and uncommon training, some account of the manner in which he found himself affected by the continued abuse

of one of the subtlest of these seductive drugs, cocaine, even though his record be not so detailed as that of De Quincey, or so thrilling as that of Bayard Taylor.

My friend and patient relates how he first came to take cocaine. It was in the year 1885, when serving in the German army. "I took it inwardly," he said, "in 1gr. doses, and remember very well the marvellous effect when after marching 'par force' 54 kil. (30 English miles) in ten hours, including one hour and a-half rest, I found myself, on arriving at quarters, fresh, untired, not thirsty nor hungry, but with bleeding feet." Going back to his medical studies, he had nothing more to do with the drug for some four years, though frequently brought face to face with morphinists and morphia-maniacs. In 1889, however, he was sent to relieve a country physician, whom he found lying in bed unconscious with a syringe sticking into his breast. Never in his life, he says, has he seen a more startling effect than that which then followed the injection of a 20% solution of cocaine. "Nearly instantaneously he sat up in bed, with perfectly clear eyes, and received me, a total stranger, in the most cordial manner." The occurrence haunted him day and night, but it was not until summoned to a late confinement some weeks later, when stiff and unable to move with lumbago, that he was weak enough to follow suit. "That night in the month of November, 1889, settled my future. Remembering well the effect of the cocaine I took a syringeful ($\frac{1}{2}$ c.grm) combined with morphia, and two minutes afterwards 1c.grm. Five minutes later I was ready to start a couple of miles in a snowstorm." He repeated the performance before driving home again. This early repetition, taken in conjunction with the dosage, raises the suspicion as to whether, after all, he has told the truth about the date of his first injection. However this may be, he took cocaine and morphia from that time forwards, increasing the dosage to 6-8 grains daily of each drug, and soon (he says within a month) came to take not less than 80-120 grains of cocaine daily. His highest single dose was 20 grains, the result being that he fell down suddenly, and remained in a cataleptic condition for some hours. His description of his symptoms is graphic, and, I think, in the main, reliable. "The first feeling a cocaineist has is an indescribable excitement to do something great, to leave a mark. But, alas, this disappears as rapidly as it came, and soon every part of the body seems to cry out for a new syringe. The second sensation—at first, at least, no hallucination—is that his hearing is enormously increased, so that he really (?) hears the flies walking over the paper. Very soon every sound begins to be a remark

about himself, mostly of a nasty kind, and he begins to carry on a solitary life, his only companion his beloved syringe. Every passer-by seems to talk about him. Often and often have I stopped persons, or ordered the police to arrest them, thinking they were talking about me. After a relatively short time begins the 'hunting of the cocaine bug.' You imagine that in your skin worms or similar things are moving along. If you touch them with wool (especially absorbent wool) they run away and disappear, only to peep cautiously out of some corner to see if there is any danger. These worms are projected only on to the cocaineist's own person or clothing. He sees them on his washing, in his skin, creeping along his penholder, but not on other people or things, and not on clothes brought clean from the laundry. How is this to be explained?" In my opinion it is a question of disturbance in the frontal cortex, originating, perhaps, in skin dyæsthesiæ, and not a simple visual hallucination or retinal projection. Whatever its origin, it is characteristic of the cocaine habit, and readily distinguishable from the hallucination due to alcoholic excess. The sight presented by such a patient "hunting for the cocaine bug" is one which, once seen, can scarcely ever be forgotten. In a recent case—that of the wife of a medical man—the patient was about to consult a skin specialist for this psychical hallucination! "About the same time," he continues, "appear many other hallucinations of the opticus, and, strange to say, self-suggested hallucinations also. Night turns to day. You sit up in your room syringing till the morning, and then fall asleep in a coma. In my case this occurred to such an extent that I had to engage a hospital warder, who came in the morning to revive me with about ten syringes 5 per cent. solution, so that I was able to drive, not walk, fearing someone might garrot me." "Other dreadful hallucinations I had in thousands, all of a persecuting character, and frightening the life out of me so long as the effects of the drug lasted. You see small animals running about your body, and feel their bites. Every object seems to become alive to stare at you from all corners—look revolvers, knives, &c., and threaten you. Yet, so soon as the effect of the injection is over, you laugh at it, and produce willingly by a new injection the same terrors. About that time I bought three St. Bernard dogs, thinking they would protect me; but one night I found out they were talking about me—how they could get rid of me—so I stood up and shot one of them with a revolver, which I always used to carry. I think this was the most dreadful night of my life—I standing on the table, with an Indian dagger and a syringe on the ground; one three-

feet-high dog going to die, and two other rather dangerous dogs roaring and groaning aloud, reproachfully looking at me, who always fancied, "Now comes the moment when they will tear you in pieces." I stood the night on the table, till the arrival of my wardman, who hardly risked to enter the room." The strangest thing, however, he says, in the cocaine habit is that "there seem to be two souls in the cocainist—one infested by the cocaine, suffering and tortured by its effects; the other normal, laughing at his fears, and saying "What nonsense; it is only an hallucination produced by an injection." "Not frightened enough by these experiences, and escaping from the troubles produced by his conduct, on he goes, taking more and more; and then enters a new kind of illusion, which finishes him up for the mad-house. I mean the revolting, dirty, sensuous illusions. The remembrance of it is for me so awful that I only tell you that one day every person I saw, near or far, appeared to be naked, and in the most lascivious positions, alone or with others. I remember on entering the surgical theatre to have seen everybody—operator, assistant, students—naked. In terror, I took to flight, ran to a medical friend at a lunatic asylum, and was placed under restraint. Well this ended (Jan., 1890) my pure cocaine habit, which in a year's time eased my pockets of about £1,600."

It was early in 1891 that I first met him in Melbourne. He was then a morphia maniac, as well as cocainist. His appearance was characteristic. He was then pallid and yellow, with hands trembling, cold, and sweaty, eyes sunken and glistening, and pupils dilated, and breathing short and hurried—restless, irresolute, and careless of his personal appearance. He appeared the embodiment of one who had just emerged from some terrifying experience. He soon became known to every chemist in the city, and from one and all bought syringes, cocaine, and morphia whenever money or credit permitted. Frequently his needle would be fastened to his syringe by sealing wax, shellac, etc., and when he had no needle at all he would cut an opening with his knife, and insert the end of the syringe direct. Almost the whole of his body except the face was marked with needle scars. A common practice was to mix 4gr. of morphia with two of cocaine—"sixpennorth"—in a two-drachm bottle, and inject by syringe until all was exhausted. The change from the shivering wretch before injection to the self-confident neurasthenic after injection struck all beholders. His experiences embraced the whole gamut of wretchedness and shame, and included both hospital and gaol. As regards abstinence, he agrees with Erlenneyer, that the symptoms are neither

manifold nor severe. "The tales about neuralgia, etc., are all lies, and, after two days' abstinence, the craving is relatively small—you feel, in fact, nothing, but the thousand possibilities of suggestion form the real danger. Then comes the maniac desire; it fascinates your whole body. Suddenly your chest seems to be screwed together, you cannot breathe, your eyes protrude, and, if you have no cocaine, you either commit suicide in some way without intending it, or murder one of your warders."

In an appendix he summarises the physiological effects of the drug as follows:—The cocainist early loses all appetite for solid food, but likes sweets, lollies, and cakes. Diarrhoea is soon produced, and immediate evacuation often follows big injections. Upon the muscular system the drug, as is generally recognised, acts as a most powerful stimulant for either single or continued effort. Not only could he make long marches without becoming tired, but on one occasion, after injection, he says he lifted a cab with one hand on the axle. It increases also the number of the respiratory and of the cardiac contractions (with vascular dilatation), as well as the quantity of urine (with large or repeated small doses, incontinence follows), and, enormously, the amount of sweat. Hence the great loss of weight. It stimulates also the sexual appetite, though, later on, power is lost, whilst desire remains. After each injection, the pupil dilates, but remains dilated only because injections are continued. When taking very large doses, he remarked that his iris seemed to separate into broad radii, with free spaces between. As regards the brain, mental processes seem quickened, but a kind of hypnosis intervenes, so that the brain works without, and even against, the will. Immediately after the injection, the cocainist becomes excited, and remains restless whilst under the influence. He likes manual work, however trifling, but has neither will nor ability for mental work, because he is bound to inject every five or ten minutes, or, in fact, because he never ceases to inject. The hallucinations and illusions already mentioned make their appearance early. One syringe self-injected is, in his opinion, absolutely sure to produce the fascinating desire for a second. He is almost certainly then a cocainist, and will procure the drug for self-administration, even when apparently it is impossible for him to do so. All watching is useless. He has thousands of excuses to get a moment to himself, generally in the neighbourhood of some chemist. Unscrupulous—even though still aware to some extent of his ties—he will get it, dishonestly, if necessary; and, even when not craving for it at the moment, he will get it, because his only idea is to have it with him.

The sense of right and wrong is not abolished, "but he does not care much about trifles." Thus he sinks lower and lower, disregards his personal appearance, and, "because they will always show, or sham to show, a certain respect to his higher education," he seeks the association of lower people. "He thus becomes a scoundrel or criminal, and does not mind to do so so long as he gets his cocaine." It is extremely seldom that he makes a trial to free himself of the habit, mainly "because he does not see any reason to do so." Suicide he never contemplates so long as he can get his beloved drug.

For purposes of contrast it may be well to add his experience of the effects of morphia. A man, he reminds us, may be for years a confirmed morphinist without being a morphia maniac, and the results are very different in the two classes of cases. He has met hundreds of men, distinguished by intellectual power and refined sense, who were confirmed morphinists, and certainly, if his list is reliable, the names fully bear out his statement. Such hate every low, unæsthetic object, and often indulge in princely habits which may cause their ruin. Morally, they never descend to a low level, except, perhaps, during abstinence. By way of illustration, he quotes the case of a morphinist who, during abstinence, stole 1 oz. of morphia, but who, so soon as he had injected himself, sent the money anonymously to the chemist from whom he had stolen it. Mentally, there is undoubtedly, he says, a stimulating effect on the brain so long as the influence of the drug lasts. The brain seems to work quicker, conceive quicker, and, before all, the morphinist likes to do mental, though he detests manual, work. In some eight hours after injection, the sublime quietness of mind is replaced by restlessness. He generally becomes pale, and loses both flesh and muscle. Many, to obtain a little colour, add a certain amount of atropine to the morphia. The desire for fluids seems diminished, and satisfied, if possible, with choice drinks. To this, perhaps, may be ascribed the small quantity of urine generally passed. Morphinists can take regular meals, preferring well-flavoured and sour articles, such as curry, pickles, etc. The sexual powers are progressively diminished, and women despised, except the highly educated and brilliant. "A sense for the eternal feminine remains, but no power, no desire."

The morphia maniac is quite a different person. One syringe self-injected for any pains is sure to have, as a necessary consequence, a second so soon as the pains recur, even though distressing sequelæ have intervened. Even more dangerous in the establishment of the habit is the use of

the syringe for insomnia. "Soon he injects for the sake of injecting, until he gradually falls into a state of imagined abstinence. His moral balance disappears early, and for him a word of honor does not exist. Feeling that he is sinking to a lower level, he may make enormous struggles, but in vain. He cannot—he despairs, and gives up every hope. Highly-increased doses momentarily restore his moral sense, but when the eight hours are over he is worse. Even when not abstaining, he may commit suicide, because he can no longer face his moral degradation. His despondency, his imagined abstinence, and the frequent injecting soon make regular brain work impossible, except, perhaps, in the morning. Even if able, however, he no longer cares for it, seeing the uselessness of his exertions. So long as he is under the influence he never has hallucinations, and seldom any illusions. Like the morphinist, he becomes pale and wasted, and shews the influence of the drug upon skin, bowels, respiration, eye, etc. He neglects his eating, however, and constipation frequently lasts for weeks, relieved immediately by a large dose of cocaine."

His remarks upon diagnosis seem to me to be similarly suggestive. "The diagnosis of a morphinist is sometimes exceedingly difficult, because he tries everything to hide his habit. The contraction of the pupils, the marks of the syringe (if hypodermically administered), and the 'going away' from other people at certain hours are in my opinion the only objective symptoms. The morphia maniac is easily found out by the foregoing symptoms, by his dislike for females, and by his sudden nervousness and paleness, which disappear immediately so soon as he has been, as he calls it, 'a few moments in the fresh air.' The cocaineist is distinguishable by his change of associations, his neglected appearance (of which he seems completely unaware), his dilated pupil, restlessness, hallucinations, illusions, and expression of anguish."

The prognosis he regards as exceedingly unfavourable. "In my opinion it depends in the first degree upon a perfect change of surroundings. The slightest article which could make a cocaineist remember some moment of his sufferings is also able to recall the fascination. Even if free for a whole year, he cannot be trusted unless it be in new surroundings. And 'kind friends' are only too willing to remind him of things which he has done, and of which he is now ashamed. So that, sooner or later he will take it again for 'spite' or 'fascination,' or some other reason not to be explained by an uncocaineised brain. For women, the prognosis is—*pessima*." With these words he concludes. His account, though perhaps

inaccurate in certain minor details, seems to me of special value in that it proceeds from a skilled observer, who himself has been behind the scenes, and watched the phantasmagoria from the subjective, as well as the objective side. It throws also an interpreting light even on the classical descriptions of Erlenmeyer, a summary of which may be found in Hack Tuke's Dictionary of Psychological Medicine, 1892, vol. I., pages 236-237. Perhaps, also, the insight thus afforded into the inner workings of an illusionised brain may lead some who have hitherto acted as hard, and even pitiless, critics, to recognise something more than "the party's criminal will" in the resultant phenomena. And may all echo the hope that this particular victim at least may find assistance and not hindrance on the dark and troublous road which he is now treading towards a better adjustment of his vital inter-relations.

Dr. ANDREW thought the paper of special interest to general practitioners who used cocaine largely, lest such should start the cocaine habit. He had never seen such to occur.

Dr. SYME quoted a puzzling case of loss of flesh and persistent diarrhoea, following the use of cocaine for pruritus ani.

Dr. OFFICER was reminded of a case in which the patient was constantly moving, owing to people talking about him, was constantly complaining of fleas, and also had a passion for mastiffs. In this case the habit followed painting the nasal mucous membrane for nasal trouble. He had run up a bill of \$81 in six weeks at one chemist's alone.

The PRESIDENT regarded the account as exceedingly interesting, but wondered how far such a patient's statements could be accepted.

Dr. MULLEN said that one practical point was that such a drug as cocaine should be put on the list of poisons. He made a motion to that effect, which was seconded and carried.

In reply, Dr. SPRINGTHORPE said that the patient had written his account when in hospital, and away from any literature on the subject, and whilst in good mental condition. As he had no object in view beyond the scientific one, it might be accepted as experience, and not fiction, and it certainly coincided very remarkably with Erlenmeyer's description of the symptoms. This habit, like all the rest, seemed the product of two factors—a neurotic basis, generally inherited, and for which the patient was not to blame; and from any one of a dozen causes the more or less accidental discovery of the symptomatic value of the drug. The peculiar temperament was the all-essential starting point, and it was this that had to be remembered rather than the drug itself in respect to medical administration. He hoped the present paper would help in the differentiation of this from similar drug-maniacs.

Aseptic Anti-touxin Syringes, graduated glass barrel, guarded, 10c.cm., with glass point, adjustable asbestos washer, and two needles, in wooden case 14s., and in nickel-plated case 18s.; spare barrels, 2s. 6d.—L. Bruck, Sydney.

Lady Typewriter, well up in office work and dispensing, seeks engagement with doctor or dentist. Address "L. H.," care of A. M. Gazette office, Sydney.

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL SECTION OF THE ROYAL SOCIETY OF NEW SOUTH WALES.

A GENERAL meeting of the medical section of the Royal Society was held at the Society's rooms, Sydney, on August 16th. The chair was taken by Dr. W. H. Goode, M.A., chairman of the section.

The minutes of previous meeting were read and confirmed.

Dr. J. A. DICK read some notes on a case of "Malignant Disease of the Lung," and exhibited the specimen, as well as some microscopical sections of the growth.

Dr. G. E. RENNIE read a paper on "Death after Head Injuries." Remarks were made by Professor Stuart, Drs. McDonagh, Wm. Chisholm and Angel Money.

DEATH AFTER HEAD INJURIES.

READ BEFORE THE MEDICAL SECTION OF THE ROYAL SOCIETY OF NEW SOUTH WALES BY G. E. RENNIE, M.D. (LOND.), GOVERNMENT PATHOLOGIST, SYDNEY.

I HAVE thought it might be of some interest to bring before you to-night the notes of some cases in which death ensued after comparatively slight injuries to the head—slight in so far as they were unaccompanied by any evidence of direct injury to the bones of the head, and any microscopic evidence of immediate injury to the brain itself.

CASE I.—A. S., a boy *æt.* 11 years, was admitted to Prince Alfred Hospital on January 5th, 1894. Two months previously he had received a blow on the head with a cricket bat, which had caused a scalp wound some two or three inches in length, from which he apparently completely recovered. Three weeks later he fell on to his head from a height of about four feet, and he never seems to have recovered from this. He became unconscious, and was believed to have a cerebral abscess. After admission to the hospital he was trephined above and behind the right ear; no pus was found, but about one ounce of clear cerebro-spinal fluid escaped. He died two days later. Post-mortem 20 hours after death. Body considerably emaciated; there was a scar across the back of the head about three inches in length, and one or two small scars on the vertex. There was also the operation wound upon the right side of the head. On reflecting the scalp, there was no sign of any injury to the deeper part beneath it; there was no trace of old or recent injury to the bones of the head; the dura-mater was healthy; pia-arachnoid deeply injected; the cerebro-spinal fluid was thickish and semi-purulent; beneath the pia-arachnoid was some semi-purulent lymph; the brain around the operation wound was softer than the surrounding parts, but the whole of the cortex

was swollen and softened; all the ventricles were dilated, more specially the 3rd and 4th, and the 1st. The longitudinal sinus and left lateral sinus contained some partially decolorised clot; right lateral sinus contained only recent dark clot; the heart was healthy; the right auricle and ventricle contained a firm mass of colourless clot, extending up into pulmonary artery; left cavities empty; lungs were congested; liver, spleen, and kidneys healthy; bladder distended; stomach and intestines healthy; no trace of tubercle in any part of the body.

CASE II.—E. P. B., *æt.* 9 years. Died on August 5th, 1894. Eight weeks previously she had received a blow on the head, above and behind the right ear, from a cricket ball which had rebounded from a wall adjacent to the spot where she was standing. The scalp was uninjured, and there was no trace of any injury to the scalp when she was seen by a doctor five days later. She was then in a semi-conscious condition, occasionally screaming out and complaining of pain in the head; she was restless and sleepless, with some muscular twitchings, but no apparent paralysis; she appeared to have improved considerably, but again relapsed, for, when seen by the same doctor about a month later, she was in much the same condition as when first seen by him. She continued in much the same state, with variable amount of improvement and relapse, till her death on August 5th.

Post-mortem 21 hours after death.

Rigor mortis well marked; body much emaciated; no marks of any injury on head or any other part of the body. On reflecting the scalp, there was no sign of any old or recent effusion of blood. The bones of the skull were healthy and uninjured. The Dura-mater was rather more adherent than usual to the skull cap, but appeared healthy. The surface of the brain was dry, and there was no sub-arachnoid fluid. Some thickening of the membranes at the base of the brain was observed, but no actual inflammatory lymph, and no macroscopic evidence of tubercle. The ventricles were very much distended with clear fluid. The walls of the ventricles were rather softer than natural, and some delicate membranous lymph was observed in the immediate neighbourhood of the choroid flexus. There was no macroscopic evidence of any bruising, or laceration of the brain. Heart was healthy, contained only some recent dark clot. Lungs were congested posteriorly. No trace of tubercle, either old or recent. All the other organs healthy. Bladder much distended.

Remarks.—These two cases resemble each other in several points. In each there was a history of

a blow on the head, but no evidence of any injury to the bones of the skull or any bruising or laceration of the brain itself. In each there developed symptoms of meningitis and cerebral compression, followed by considerable emaciation, and death after the lapse of several weeks. Dr. Bristowe has recorded two cases of tubercular meningitis in children, the symptoms of which ensued directly after a blow on the head. In one of his cases there was an old caseous focus at the apex of one lung and recent miliary tubercle around it, as well as in the liver and spleen. In his other case no tubercle was found in other parts of the body, but no examination of the abdominal cavity was made, so that the presence of tubercle in other parts of the body could not be definitely excluded. In each case death resulted in three weeks from the time of receipt of the blow. With regard to these two cases Dr. Bristowe says: "There is no sufficient reason, of course, to suppose that the tubercular deposit was caused by, or even supervened on, the blows upon the head. Doubtless the natural course of events in each case was, first, the deposition of tubercles, unattended with marked symptoms or obvious deterioration of health; and second, the super-vention of inflammation and dropsy excited by the local injury, to which, and not to the tubercular deposits immediately, the patient's symptoms and death were due." I must certainly apologise for venturing to express a contrary opinion to that of so eminent an authority as Dr. Bristowe, but it seems to me more probable that in these cases the subsequent inflammation and dropsy were the expressions of the reaction of the tissues against their invasion by the tubercle bacilli, and were not excited by the local injury; for, according to our modern notions, inflammation always means reaction of tissues against a noxious influence, this influence being in these cases the tubercle bacilli, and Dr. Bristowe offers no explanation as to why or how a meningeal inflammation and dropsy can be excited by a comparatively slight head injury. But, with regard to the two cases I have described above, there was an entire absence of any macroscopical evidence of tubercle in any part of the body; and in cases of tubercular meningitis death generally ensues within three weeks from the development of symptoms, so that I think we may reasonably doubt if tubercle was the cause in these cases of the inflammation. Further, there was no evidence of syphilis or ear disease. Under these circumstances, I ask what was the relation of the blow on the head to the development of the meningeal inflammation, and what was the noxa which induced such inflammation?

The third case I have to relate is a case

of undoubted tubercular meningitis, developing directly upon the receipt of a blow on the head.

CASE III.—E. M. W., *æ*t. 13½ years; school-girl; died May 24th, 1895. One month previously she had been struck on the back of the head by the teacher with an umbrella. One of the school children told deceased's mother that after she was struck she turned very pale, but did not faint. She immediately complained of headache, and told her mother what had happened. The headache gradually got worse, and she took to bed ten days before death. The headache became very severe; persistent vomiting and obstinate constipation ensued. There was no squint or paralysis, but her sight failed, and she had occasional twitchings of the both arms. She never had any fit, and remained conscious up to the last. Previous to the blow on the head she had been a strong, healthy girl, and had had no previous illness except measles eight years before. There was no tubercular family history.

Post-mortem 86 hours after death. Body somewhat emaciated. *Rigor mortis* still present. No external marks of violence. *Head*: On removal of scalp, no sign of any old or recent bruise or effusion of blood; the skull was intact, and there was no sign of any injury to it. On removal of the skull-cap the convolutions of the brain appeared somewhat flattened, but there was no excess of cerebro-spinal fluid. The surface of the brain was hyperæmic. On examination of base of the brain, there appeared some thickening and opacity of the membranes about the circle of Willis, but no visible lymph or pus. The pia-arachnoid in the Sylvian fissures was unduly adherent to the cerebral cortex, and there was a deposit of very minute grey tubercular granulations. The membranes around the medulla and cerebellum appeared slightly thickened, but there was no dilatation of the ventricles or iter. There was no bone disease about the base of the skull. The sinuses contained recent dark clot and some fluid blood, but, with the exception of a small caseo-cretaceous nodule, of the size of a split-pea, in the upper part of lower lobe of left lung, there was no trace of any tubercle anywhere else in the body.

CASE IV.—S. J., *æ*t. 64 years, carpenter; had been a healthy man all his life, though occasionally intemperate in habits. In the early hours of July 17th, on getting out of a cart, he tripped over the reins, and struck the back of his head on the kerbstone. He immediately lost consciousness, and died in about an hour.

Post-mortem ten hours after death. Body well nourished. There was a scalp wound about 1½ inches in length on the back of the head, just to the left of the external occipital protuberance.

The wound extended through the scalp down to the bone. There were no other signs of injury to the body. On reflecting the scalp, there was found a small extravasation of blood beneath the scalp at the site of the wound, but no sign of any injury to the bones of the skull. On opening the head, the brain was found to be intact. No macroscopic lesion of any kind was observed; no hæmorrhage or laceration of brain; and the blood-vessels were all healthy. The heart was slightly hypertrophied, the blood in it quite fluid. The lungs were congested posteriorly. Liver enlarged and fatty. Spleen healthy. Kidneys were normal size, but congested. Showed no signs of chronic or recent disease. Bladder contained small amount of urine, healthy. *Stomach and intestines* healthy. What was the cause of death in this case? We can, I think, only come to one conclusion, and that is that death was due to cerebral concussion, whatever that may mean. To enter upon a discussion of the various theories which have been advanced in explanation of the ultimate pathology of concussion would take up far more time than is at our disposal to-night. I will only refer to one theory—that of M. Duret—which has been proved experimentally to be most in accord with ascertained facts. To understand this theory I must remind you of the anatomical distribution of the cerebro-spinal fluid.

1. Everywhere the brain is surrounded by a layer of cerebro-spinal fluid, varying in thickness and depth at different places.

2. The brain is hollowed out by a series of cavities, the ventricles, and these are filled with cerebro-spinal fluid.

3. In connection with each blood-vessel, as it enters the brain substance, there are two distinct lymph spaces—(a) the adventitial lymph space between the tunica muscularis and the tunica adventitia, and continuous with the sub-arachnoid space; and (b) the perivascular lymph channel between the tunica adventitia and the brain substance, and continuous with the epi-cerebral space. These spaces, the latter of which continues to surround the blood-vessel in its minutest ramifications, are filled with cerebro-spinal fluid, in which the blood-vessels are suspended.

4. And lastly, the nerve cells are similarly placed, each cell being suspended, as it were, in a small excavation in the brain substance, called a pericellular sac. The communication between the perivascular spaces and the pericellular sacs depends on the connective tissue cells of the neuroglia, which are distributed along the adventitia of the arterioles and on to the arterio-venous capillary plexus, and thus establish a connection between the sacs and the spaces.

These four elements, all in direct anatomical

continuity with one another, go to make up the cerebro-spinal fluid system of the brain.

Now, it has been shown that the skull is highly elastic, so much so that it will rebound to a considerable extent if dropped from a height; and further, at the part of the skull which is struck, there is a momentary depression of the bone, called by Duret the cone of depression, and at the opposite pole of the skull a corresponding bulging of the bone, called the "cone of bulging." What takes place, then, in a case of a person falling from a height on to his head, or receiving a severe blow on the head, is briefly this:—At the point of impact the skull is depressed, forming the cone of depression, and from the area into which this cone projects the cerebro-spinal fluid is forcibly expressed. The fluid is all, or mostly all, accommodated at the opposite pole, *i.e.*, at the cone of bulging. The cones of depression and of bulging are, however, of only momentary existence, the elasticity of the skull permitting it at once to return to its *status quo*. Therefore, at each point there is formed a vacuum, first at the cone of depression when the bone recoils, and next at the cone of bulging when the fluid recedes. The result of this is that the blood-vessels of the membranes and brain substance at these points are left for the moment unsupported, and they rupture. Such a mechanism would explain the occurrence of lesions, not only at the seat of injury, but at the opposite point of the skull and brain, these so-called lesions of *contre-coup*. But these are not the only results of the sudden wave started in the cerebro-spinal fluid at the cone of depression. On receipt of the blow, part of the fluid displaced at the cone of depression rushes along the perivascular space of the intra-cortical vessels, dilating to them to their ultimate ramifications, even to those surrounding the nerve cells. The increased tension compresses the nerve fibres, and disturbs the equilibrium of the nerve cells, the final result being a destruction of a certain amount of nervous tissue; the amount so destroyed depending upon the severity of the blow. Dr. Alex. Miles, of Edinburgh, who has recently done some valuable work on cerebral traumatism, has noticed both in his experimental and clinical cases the existence of large numbers of so-called colloid bodies, scattered through all parts of the brain. These bodies must have been formed with extreme rapidity in some cases—*e.g.*, he has found them in the brain of a bird, which only survived a severe blow on the head a few minutes. Hence they can only be derived from one element of the brain tissue, *i.e.*, the myelin of the nerve tubules, and their staining reactions entirely agree with such an origin. The presence of these

bodies, and the petechiæ scattered through the brain, give us evidence of actual destruction of nerve tissue from the anatomical side; and, clinically, we know that, though the majority of cases of simple concussion recover perfectly, in some there remains impairment of mental powers and of sensory functions, and these defects are at times permanent. Further, I think that we have here the true explanation of a well-recognised clinical fact, *i.e.*, the frequent onset of encephalitis after concussion. As I have mentioned in a previous part of this paper, inflammation presupposes the existence of a noxa; when, therefore encephalitis ensues after concussion, it is really the reaction of the healthy and uninjured nerve structures against the protoplasm of nerve fibres, cells, etc., which have been killed by the violence of the disturbance of the equilibrium in the cerebro-spinal fluid. I have endeavoured to show that in every case of concussion a profound change in the protoplasm of the brain tissue is produced—a change so profound as to lead to death of the patient in a short time. One question arises out of this: In cases of severe head injury—in which we find, perhaps, a fracture of the skull, and a slight meningeal hæmorrhage—we are apt to ascribe death to such hæmorrhage. Are we right in so doing? If such profound changes in the brain can cause death without giving any macroscopic evidence of their existence, may not the meningeal hæmorrhage be merely an accidental concomitant, and not the actual cause of death? In this connection I will briefly refer to three cases of head injury which were admitted to University College Hospital, London, under the late Mr. Marcus Beck.

1. A woman, *æt.* 25 years, was admitted with symptoms of meningeal hæmorrhage after a fall, and was operated upon about three hours and a-half after the accident. The clots were removed, and the symptoms of compression relieved, but she gradually became worse, and died in sixteen hours with symptoms of gradual asphyxia. *Post mortem*: The dura-mater was found uninjured, and the brain showed scarcely any perceptible flattening at the seat of clot.

2. A boy, *æt.* 7 years, fell from a wall, and in two hours was operated upon; meningeal hæmorrhage had occurred, and the clots were removed. He improved slightly, but died within twelve hours, with rapid pulse and respiration, and hyperpyrexia,—symptoms, I would remind you—of the so-called state of reaction after concussion. *Post mortem*: The brain seemed perfectly healthy; there was no flattening of the convolutions or other signs of pressure, and nothing to account for the fatal termination could be found.

8. A man was admitted to hospital after a fall, with severe symptoms of cerebral compression. He was trephined, and a large clot removed. The patient died within eight hours, the symptoms remaining much the same, except that, instead of the slow pulse of compression, the pulse was more rapid, but irregular and intermittent. Mr. Beck offered no suggestion as to the cause of death in these cases. Dean, in a paper on cerebro-spinal pressure, has adduced these cases in support of the theory that after relief of pressure on the brain by removal of the clots, a spreading oedema caused by the pressure of the clot, and a further oedema produced by the hyperæmia of the removal of the clot, tend to progress, and, finally, produce death. In this theory no consideration is given to the fact that in all these cases there had been a violent fall upon the head, and I venture to submit that in these cases the true cause of death was concussion.

An interesting and instructive paper of some length was read by Dr. R. L. Faithfull upon

"THE SIGNIFICANCE OF ALBUMINURIA,"

more especially as regarded by medical examiners for life insurance, in which he states that we cannot say albuminuria *per se* points to the disease of any one special organ, or to any general pathological condition. After this he names the various conditions under which albumen is found present in the urine, and calls particular attention to a form of albuminuria apparently functional in character appearing with or after la grippe.

The opinions of well known British and American authorities are quoted, also the opinions of the medical examiners of most of the leading insurance companies of the United States, and from the foregoing he is disposed to deduct the following conclusions:—

1st. As the clinical significance of albumen in the urine of otherwise apparently healthy individuals has not yet been finally or satisfactorily determined by the majority of the most careful observers, it must not be expected that life insurance companies will accept such risks, except reluctantly, and then only after most careful and repeated chemical and microscopical examinations of the urine by known and trusted medical examiners.

2nd. Albuminuria must be viewed with suspicion and distrust. That of a persistent character, from whatever cause, calls for rejection.

3rd. Albuminuria in applicants under 40 years of age, who present a good family and personal history, who are of good physique and of good habits, and are free from any taint, hereditary or acquired, the amount of albumen being small and transient, may, after careful and repeated examinations of the urine, be accepted on short endowment plans of insurance, or upon other plans with an extra premium to cover substantial loading.

4th. Albuminuria, dependent upon or following La Grippe, and not present three to six weeks after, in otherwise healthy applicants, the specific gravity of whose urine for the twenty-four hours is not below 1020, may be accepted on ordinary life policies without loading.

5th. Any applicant with albumen in the urine, with increased arterial tension, with urine of a low specific

gravity, and with any indication of hypertrophy of the heart, or accentuation of the second aortic sound, should be rejected.

6th. Any applicant with a persistently low specific gravity, with or without albumen in the urine, should be rejected, and more especially so if with the above he should suffer from occasional occipital headaches.

7th. In all cases of albuminuria the condition or state of the arteries should be carefully investigated, especially so if the applicant is over 40.

Remarks were made by Drs. Sydney Jones, Angel Money, and Rennie.

Dr. C. J. Martin exhibited a simple apparatus for drying serum, and keeping it sterile during the process.

A resolution to the effect that the secretaries be instructed to write a letter expressing the sympathy of the members of the section with Mrs. L. R. Huxtable, on the death of her husband, was moved by Dr. W. H. Quaife, and seconded by Dr. Wm. Chisholm, and carried unanimously.

MEDICAL SOCIETY OF QUEENSLAND.

THE 104th general meeting of the Society was held on August 13th, 1895, in the Society's rooms. Present: Dr. Hill (President), Drs. Little, Gibson, Byrne, Love, Thomson, Wheeler, Bancroft, Ure, Booth, and Turner.

Dr. HILL showed a case of exophthalmic goitre in a woman aged 30, and gave a short account of the case. There was very evident thyroid enlargement, a moderate degree of exophthalmos, an irritative cough, and a hard, bounding pulse. He proposed to administer iodide and bromide of potash, together with digitalis.

Dr. GIBSON believed that the symptoms of this disease might be attributed to an excessive secretion by the thyroid gland; and alluded to a case in which the removal of an enlarged thyroid lobe, on account of pressure symptoms, had been followed by arrest of symptoms resembling those of Graves' disease. In a case of exophthalmic goitre over 30 years of age not improving under treatment, he would seriously consider the advisability of removing part of the thyroid.

Dr. LOVE had seen a case of recovery above 30 years of age.

Dr. LOVE showed a milky fluid obtained by puncturing an enlarged olecranon bursa. The milkiness was due to innumerable crystals of biurate of soda.

THE HON. SECRETARY read for Dr. Paul, who was unable to be present, "Notes of a case of Hydrorrhœa of the Gravid Uterus."

Dr. URE remarked that we were apt to be misled by patients mistaking unconscious micturition for discharge from the uterus, and that it was advisable to satisfy oneself of the albuminous nature of the fluid.

Dr. LOVE had had a case of hydrorrhœa gravidarum. He believed that pregnancy did not, as a rule, go on to full term. In his case there was a flow of undoubted amniotic fluid for a full month, pregnancy terminating at the seventh month. He considered the condition was nearly related to that of hydramnion.

Dr. BOOTH had had a case which miscarried at the seventh month. The previous pregnancy had been similarly complicated, but went on to full term.

Dr. GIBSON moved that a letter be written by the Hon. Secretary to the widow of the late Dr. Huxtable, expressing the great regret of the Society at his early death, and their sense of his zealous and unselfish devotion to the best interests of the profession in Australia. This was seconded by Dr. Love, and carried unanimously.

WESTERN MEDICAL ASSOCIATION.

THE general meeting of the Western Medical Association was held at the Town Hall, Petersham, on Tuesday, 13th August, 1895. Present: Dr. McAllister (Vice-President) in the chair, Drs. Blackwood, Frizell, Chenhall, Maguire, Collingwood, Pope, Kirkland, McIlroy, W. F. Quaife, Schrader, Kelly, Furnival, Stokes, Coutie, Abbott, and Mr. Asprey.

References were made to the deaths of Drs. Kendall, Harper-Crewe, and Huxtable.

During the evening Dr. Pope exhibited some patients suffering from various diseases of the eye, and a special room was set apart for ophthalmoscopic examinations.

A social meeting followed the business of the evening, Dr. Maguire and Mr. Asprey assisting to make the time pass pleasantly.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

THE fourth meeting of the Intercolonial Medical Congress of Australasia will be held at Dunedin, New Zealand, in February, 1896. The President, Dr. Ferdinand Bachelor, and Dr. H. L. Fergusson, during the month of August visited Sydney, during a tour through the Australasian colonies with the view of promoting the interests of the Congress throughout Australasia. The Congress will meet on 3rd February, 1896, and will last a week. In addition to the professional and scientific work contemplated to be done during that time, arrangements are being made to allow visitors from all other Australasian colonies opportunities of seeing localities containing the best of New Zealand scenery, the health resorts of the islands, the mineral springs, and the sulphur baths. Special concessions will be made to members of Congress and their wives by the New Zealand Government, who have been promised free passes over all the lines of railway in the colony, and special arrangements have been made with the Union Steam Ship Company for passages to and from New Zealand at a reduced rate.

Those of the New South Wales medical men who wish to take advantage of the arrangements made for the visitors from Victoria and South Australia will be able to join the Maranoo at Melbourne, returning to Sydney direct either from Wellington or Auckland. The majority of the New South Wales contingent are, however, expected to sail from Sydney, and for them arrangements will be made to give them the choice of alternative trips on their way south to Dunedin.

For those leaving Sydney about the middle of January there will be time to visit the Hot Lakes and pass through the King Country on their way south, while those sailing for Wellington direct a few days later would have time to visit the Wanganui River, or to go south by the magnificent coach drive from Nelson to Hokitika, and thence across to Christchurch by the Otira Gorge. An alternative trip would be to Mount Cook, amongst glacier scenery insurpassable in the world.

On the termination of the congress the New South Wales members can return direct to Sydney, via Wellington, or will be afforded opportunities of further pleasure by visiting the Cold Lakes, or joining in fishing and shooting excursions in some of the Otago rivers before their departure.

Provision will be made for the judicious division of the contingents from the various colonies, so as to avoid any difficulties from over-crowding in coach or

hotel accommodation. For this purpose it will be necessary that members intending to be present should give early notice to the secretaries of their intention of being present at the Congress, so that such arrangements as may be necessary shall be made for their comfort and convenience.

Professor Scott and Dr. L. E. Barnett, of Dunedin, are the general secretaries, and Dr. P. E. Muskett, of Sydney, is the local secretary for New South Wales.

OBITUARY.

WILLIAM GILLET SEDGWICK, M.R.C.S. ENG.

ONE by one the old familiar faces are rapidly disappearing from the ranks of our profession, for death has been unusually busy amongst us of late. Mr. W. G. Sedgwick, whose demise we now record, was born at Maidstone, Kent, England, in the year 1819. He received his education at Christ's Hospital, London—commonly known as the Bluecoat School—and was afterwards apprenticed to a Mr. Wildash, a surgeon who was practising in his native town. His diploma of membership of the Royal College of Surgeons of England (which was signed by the President, the late Sir Benjamin Brodie, Bart.) was dated August 23, 1844. For some years after qualifying, Mr. Sedgwick practised his profession in England, and in 1854 he emigrated to New Zealand as Surgeon to the North British and Australasian Company at Auckland. This position he held for two years, when he came to Sydney. He registered his diploma here on July 1, 1856, and about that time commenced practice at Newtown, where he has since resided, and where his death took place on August 17 last, at the age of 76. The cause of death was heart failure, the result of fatty infiltration, and, although the termination of life was sudden, he had been ailing for some months, and caused considerable anxiety to his medical advisers. Mr. Sedgwick was a prominent Sydney citizen. He held high positions in the Masonic order, and was a trustee of St. Stephen's Church, Newtown, for many years. As an instance of his popularity, it may be stated that he held the post of medical officer to St. John's Lodge, I.O.O.F., M.U., for 35 years. The funeral took place on August 18, when a large number of medical and other friends assembled at the grave in St. Stephen's Cemetery, Newtown, to pay a last tribute of respect to one who had, during a long and busy life, endeared himself to all with whom he had come in contact.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Watson, George Glendinning, M.B. et M.S. Univ. Edin. 1891; L.R.C.P. Edin. 1889; L.R.S. Edin. 1889; L.F.P.S. Glasg. 1889.
Lovegrove, James Francis, L.S.A. Lond., M.R.C.S. Eng., 1860.
Davies, Edwin Zerubabel, M.B. Univ. Melb. 1894.
Brown, Robert Lee, L.R.C.P. Edin. 1893; L.R.O.S. Edin. 1893
L.F.P.S. Glasg. 1893.

NEW ZEALAND.

Sloan, Hugh Roger, M.D., Ch.M. Glas.
Barnes, Joseph Marshall, M.B., Ch.M. Aberd. 1886.

TASMANIA.

Jamieson, Stanley Connebee, M.B. 1894, Ch.B. 1895, Melb.

NOTICES.

All communications intended for publication may be addressed "The Editor, Australasian Medical Gazette, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

The Australasian Medical Gazette and the British Medical Journal are supplied to all Financial Members of the New South Wales, South Australian, and Victorian Branches Free of Cost.

Subscriptions (£2 2s. per annum) should be forwarded to the respective Branch Treasurers as below—

New South Wales, Dr. Crago, 34 College Street, Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, SEPTEMBER 20, 1895.

EDITORIALS.

THE MELBOURNE HOSPITAL ELECTIONS.

By virtue of its position as a great metropolitan charity and the clinical school for the Melbourne medical school, the Melbourne Hospital holds a leading position in Australasia. Its mode of electing its honorary medical staff is therefore a matter of very great importance to both the public and the medical profession.

Much picturesque indignation might be avoided if it were only remembered that no one who does not hold a sound professional qualification, and who is of less than five years' standing, can become even a candidate for election. It is upon this broad, and, upon the whole, satisfactory basis of competency, that the staff is elected every four years by the vote of the subscribers, who number some 4,000 persons. No doubt it is true that such a popular electorate has no special fitness for making such professional appointments; but the same objection applies equally well to nearly all other electing bodies which fulfil similar functions in similar institutions throughout the whole of the colonies. It is undeniable also that it includes many "faggot" and other objectionable votes, but it is equally beyond question that no other electorate so

thoroughly represents the best interests and common sense of the community. Judged by results, indeed, the comparison with other electing bodies in similar institutions in the same metropolis is undoubtedly in its favour. After a series of elections, it can be asserted with confidence that this popular electorate has made the fewest mistakes, even under unparalleled stress, and has maintained a personnel worthy of its position. Even from the educational point of view, it remains true that the training of students is carried out to the satisfaction of the authorities, and that the Hospital teaching is on a level with the University portion of the curriculum.

It is interesting, therefore, to find that this popular vote has also always carried into effect certain well-established axioms of Hospital appointments. Thus, it has practically always remembered faithful service, declined to put out able servants, or disappoint brilliant assistants, simply to introduce seniors from outside, and retained seniors so long as they were competent and anxious to continue their duties. And it has consistently affirmed these sound Hospital principles, even when exploited to a degree that few other electoral bodies could have successfully withstood!

Without claiming anything like perfection, however, for this democratic mode of election, it may well be asked, Wherein lie the disgrace and scandal that have come to be associated with it? The answer is that it exposes the profession to a strain from which it should be spared, and which has proved too great for it to bear. In the presence of such an election, candidates are, according to the College of Physicians, justified in issuing, to the subscribers only, a card or circular containing the grounds on which they are seeking to be elected. Only a small minority, however, are content to thus maintain their professional status and self-respect. The rest, in their anxiety for election, throw professional ethics to the winds. They have secretaries and committees, advertise in the press, employ paid and unpaid canvassers, make personal canvass, and resort to all the tactics of a Parliamentary election. For months they bombard the electors with cards, circulars, letters of recommendation, and the like, and every available elector is seen either personally or by deputy. On the day of election the climax of degradation is reached, and the throngs of canvassers, shoals of cards, decorations, lines of conveyances, and free drinks remind one of scenes from *Pickwick*. The whole system, indeed, has become not only a professional disgrace, but a public nuisance, and on both sides, fortunately, matters have now

reached the breaking point. Almost everyone has now agreed that some reform is necessary. The only question is in what direction should reform be sought.

Not unnaturally, many advocate a change in the electoral body. Some suggest a small committee. Those behind the scenes, however, know too well how apt such a body is to be narrow, and how easily it is "nobbled." Others would give the preponderance to the profession. Such forget the littlenesses of professional jealousy, and the greatness of the public distrust. Others again recommend a committee from University, Hospital, and profession. Theoretically advisable, such a combination is difficult of attainment, is viewed dubiously by many, and would scarcely be conceded by the subscribers. And when we remember the results which have followed under the present regime, it appears as if we ought to look rather in other directions for our necessary reform.

Accordingly, there are some who advise that only part of the staff retire at a time, and that the tenure of office be lengthened. But the result, surely, would be simply that, though the occasions for degradation might be less frequent, the scandals would be greater when they did come. Others, again, would be satisfied if it were made a rule that no one was eligible for election to the in-door staff until he had served a term in the out-door staff. But this would only lessen, without removing, the elements of professional disgrace.

Under all the circumstances of the case, the most satisfactory way out of the difficulty seems to be the following:—Crystallize into rules the principles already adopted. Thus, draw up all the safeguards necessary to ensure satisfactory performance of duty on the part of the different members of the staff. Let the in-patient staff remain in until they reach the age of 60; on retirement, let their places be filled by the senior out-patient physician or surgeon, and let the vacancies in the out-patient staff be filled as they arise by the vote of the subscribers, as at present. All new members of the staff will thus be elected by a broad, not a narrow electorate, and see ahead of them years of hard out-patient work before they could obtain promotion. There would thus be to the Hospital, guarantee of increasing competency, to the out-patient staff, the right of succession after long and valued service, to the in-patient staff, security of tenure, and to all, friendly inter-working, a spirit of *esprit de corps*, and freedom from unnecessary, undeserved, and degrading solicitation. Injustice would be done to none, and a notable modern instance once more fall into line with good English and Continental precedent.

THE ADELAIDE (S.A.) HOSPITAL.

For some time past there has been enacted in Adelaide a farcical comedy—or ought we to call it a passion play—which appears to have deeply interested all classes of the community. The caste has been a humorous and powerful one. The martyrs of the piece have been two nurses of the Adelaide Hospital; the chief villain, Dr. Perks, the medical superintendent, assisted by a chorus composed of members of the Board of Management; the rôle of saviour of oppressed humanity has been undertaken by Mr. Kingston, the Premier of the colony, who seems to have rather overdone the character by playing too much to the good, whose propitious assistance will shortly be required at a general election. We will attempt to give a digest of the piece, without considering the many bye-plots which are connected with the story.

Some eight months ago the Board of Management of the Adelaide Hospital had occasion to fill a vacancy in the post of Night Superintendent of Nurses, and at the same time an intimation was received from the Chief Secretary that the appointment was to be made, if possible, by the promotion of one of the existing nursing staff. Under the circumstances, the Board, instead of advertising for applications, consulted the medical superintendent as to the eligibility of any of the nurses for promotion. Dr. Perks reported in writing, somewhat incautiously, though it is only fair to say that his memorandum was not intended for the press, that a Miss Gordon was the *only* nurse in the Hospital suitable for the post. The Board unhesitatingly accepted this recommendation, although it seems that the majority of its members were quite unaware previously of Miss Gordon's existence, and still more unconscious of the fact that she was the sister of no less a personage than the Chief Secretary himself. Now, before any appointment made by the Board or any dismissal can take effect, the sanction of the Chief Secretary is necessary. It so happens that Miss Gordon was the junior of all the charge nurses, and they naturally felt aggrieved, not only at their claims to promotion being overlooked, as they fancied, but also at the slur cast upon their capabilities by the memorandum of Dr. Perks. Many of them held flattering testimonials from members of the Honorary Medical Staff of the Hospital, and one possessed a most satisfactory recommendation from Dr. Perks himself. The nurses represented their grievances to the Board, but their communications were couched in language which suggested that they had been ill-advised in the matter. Dr. Perks immediately modified

his minute, substituting *most* for *only*, and the nurses all apologised for their conduct, except two, in Nurses Hawkins and Graham. These nurses, meanwhile, found champions who advocated their case in the daily papers, and suggested that the reconsideration of the matter, which had been ordered by the Minister, would inevitably be unsatisfactory if conducted by the present Board of Management, as it was not likely that the Board would stultify itself by altering its decision. They therefore clamoured for an independent enquiry. This trifling matter of administrative detail had by this time become a national question, and at a still later stage it is said to have threatened to cause a disruption of the Ministry.

Ultimately a Royal Commission was appointed, presided over by the Treasurer, and including amongst its members a politician, who subsequently never denied that he had been, as alleged, the legal adviser of one of the nurses in question. The deliberations of the Commission resulted in an interim report, in which practically everyone was exonerated from blame, and a *status quo ante* suggested, but the Hospital Board very naturally considered that a reinstatement of these two nurses would interfere with the proper discipline of the institution. After a prolonged resistance the Board found itself obliged to obey a peremptory order of the Chief Secretary, so far as Nurse Hawkins was concerned, because her suspension had never received the sanction of the Minister, but it has declined to reinstate Nurse Graham, whose appointment as a charge nurse had never been confirmed by the Minister, and it is considered by the *Register* likely that this compromise will terminate the matter. We have thus given a bare history of the matter which has occupied columns of the local papers during the last few months, and it would only complicate matters to discuss the behaviour of the Premier in omitting to reappoint the Board of Management at the proper time, or the wordy duel between Mr. Kingston and Dr. Way (a prominent member of the Board), or the alleged boycotting of Nurse Graham by Dr. Marten. We merely mention them to illustrate the amount of feeling that has been excited over the matter. One thing is certain, and that is that the Board of Management and Dr. Perks have had the entire sympathy and approbation, not only of the staff of the Hospital, but also of the medical profession of the colony at large. The sooner the management of the hospital is freed from political influence the better it will be for the institution.

LEPROSY AND PHTHISIS.

In several of the Australian colonies laws are in force providing for the compulsory notification of all cases of leprosy, and for the detention and isolation of patients suffering from the disease. Considering the few cases of the malady which appear in our midst, it seems somewhat inconsistent that such measures should be enacted, while deadly diseases, proved without doubt to be infectious, are permitted to carry their germs through the streets and public places and deal out misery and death on every side. In an able article in the *A. M. Gazette* for March, 1895, Dr. Ashburton Thompson asserts that there is no positive evidence to support the theory that leprosy is a communicable disease, and points out that there is no clear proof that leprosy has ever been introduced into a previously non-leprosy area by means of imported lepers. Dr. Sims Woodhead ("*Bacteria and their Products*") tells us that, "From its resemblance to tubercle, and from the fact that its specific bacillus is found constantly associated with the disease, . . . it is evident that the bacillus bears a constant—probably a causal—relation to the disease, and it was therefore supposed that leprosy might be carried from one individual to another through its agency; that, in fact, the disease was a specific infective disease, and was inoculable. Numerous experiments, made with the object of proving this thesis, have, however, failed." He further states that, "even the inoculation of fragments of leprosy tissue gave rise in all recorded experiments to no true leprosy, unless the patients were already the subjects of the disease." Flügge ("*Micro-organisms*") says that "all attempts at cultivation of the leprosy bacilli have been, as yet, in vain." On the other hand, there is overwhelming evidence that, if the patients be removed from the districts where the disease is endemic, lepers may mix freely with healthy inhabitants, without imparting to them the malady; that medical men and nurses in attendance on leprosy patients do not contract the disease; and that leper lazarets do not act as centres of contagion in a district. To these arguments may be added the opinion of the Royal College of Physicians of London, that "the all but unanimous conviction of the most experienced observers in different parts of the world is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the experience of the attendants in leper asylums is especially

conclusive upon this point. The few instances that have been reported in a contrary sense either rest on imperfect observation or they are recorded with so little attention to the necessary details as not to affect the above conclusion." In addition to all this, leprosy is rare in Australia. Few cases are discovered, and these only when the disease is fully developed, and the infective agents, if there be any, have had time to become scattered far and near.

But all this cannot be said of some of our national scourges. For instance, there are over 4,000 deaths from phthisis every year in the Australasian colonies. Yet, though the infectiousness of phthisis has been proved beyond the shadow of a doubt, no steps are taken to prevent its spread. We know that healthy adults may become infected through breathing the same atmosphere as phthisical persons, and yet we do not seek to isolate the subjects of the disease. Some years ago the Collective Investigation Committee of the British Medical Association inquired into the alleged communicability of phthisis, and addressed circulars to all members of the Association asking for the results of their personal experience as to the transmission of infection from one person to another. Out of 1,078 members who returned answers to the questions, 261 believed they had seen cases which had originated in communication from one person to another; 39 more had seen cases which made them *doubtful* whether phthisis might not be so communicated; while 105 offered facts and arguments which seemed to them to negative such a view. Most of the positive cases related to the communication between husband and wife; in 109 it was stated that the disease was transmitted from husband to wife, and in 69 from wife to husband. It was distinctly stated in 180 of these cases that there existed *no family predisposition* to phthisis in the partner to whom it was supposed to be conveyed. One remarkable case reported was as follows:—Miss R., aged 48, dressmaker, had three apprentices—young girls from 17 to 19 years of age, not related, from three adjoining villages—who took it in turn to remain in the house and sleep with her, each one for a week at a time. During their apprenticeship Miss R. was taken with phthisis, of which she died. In less than two years afterwards all three apprentices succumbed to phthisis, although *in the family history of each no trace of phthisis existed*, and the parents, brothers and sisters of two of them were alive at the time the case was recorded. It is well known that the air of rooms in which consumptives live becomes contaminated with bacilli, and even the dust of such rooms has been shown to be infective.

Under these circumstances, the question arises as to the consistency of declaring leprosy to be a notifiable disease, and allowing phthisis to remain exempt, and one may also doubt the necessity for these Leprosy Acts, which are enforced at great expense to the public of the various colonies. Would not the money now expended in treating lepers be more usefully spent in the establishment of consumptive hospitals and the adoption of measures to prevent the spread of that disease which carries off so many persons in the prime of life, and which ranks first among the causes of death throughout the Australasian colonies?

THE MINMI COLLIERS AND MID-WIFERY FEES.

It is with much pleasure that we record the following incident, which reflects the greatest credit on all the parties concerned. Last month an election for medical officer to the Minmi (N.S.W.) collieries took place, which resulted in the return of Dr. A. M. Gledden by a large majority. After the ballot the successful candidate was called into the committee room, and, when the new rules had been read over to him, he was asked to sign them. Dr. Gledden stated that he would comply with the whole of them except one referring to mid-wifery cases, for which it was provided that a fee of half a guinea should be paid to the medical officer. Dr. Gledden said he was not prepared to turn "blackleg," and that his reputation was of more value to him than this monetary consideration. Dr. Gledden's words evidently impressed the miners, who decided to hold a public meeting in order to rescind the objectionable rule, and allow the original fee of one guinea to stand. A few days later a large meeting of the miners was held, when Dr. Gledden's objections were laid before them, and they, with creditable good sense, at once cancelled the obnoxious rule. We congratulate Dr. Gledden on his straightforward, manly effort to uphold the dignity of the profession. It is quite clear that many lodge patients are amenable to reason, and we fear that some of the members of our own body are to blame for the bed-rock fees which are now paid them by lodges in Sydney and elsewhere. Had they, when an attempt was made to cut down lodge fees in the first instance, strenuously resisted, we feel sure that many of them would be in a much better position to-day than they find themselves.

LETTERS TO THE EDITOR.

PHTHISIS IN AUSTRALIA.

(To the Editor of The Australasian Medical Gazette.)

SIR,—The perusal of Dr. Mullins' interesting and suggestive paper in the August number has led me to the making of some remarks as far as concerns what he says about the Orange district in its mortality from phthisis in the years under review. Dr. Mullins has noted the point of the death-rate being rendered higher by imported cases as regards each colony as a whole, but the variations of the death-rate and incidence of the disease within the area of each colony is so great as to require that the question of imported cases should be kept in view here also. Anyone who has thought upon the subject must be familiar with the difficulties which surround an investigation and determination of this and many other points, and one cannot therefore sufficiently value the results which Dr. Mullins has so far succeeded in collecting and laying before your readers.

The passage of Dr. Sydney Jones' proposition at the last meeting of the British Medical Association in Sydney cannot but raise the question of the *locale* of such a scheme being worked as he therein sketches.

I hope one recognises that we have no axes of our own to grind, but the profession as a whole is desirous of ascertaining honestly and decisively where such cases should be best situated for recovery. As far as Orange is concerned, increasing experience brings home to one the fact that there are certain cases which will not do well here, while there are others which we gravely question would do as well elsewhere.

But now I find myself confronted by the serious fact that Dr. Mullins finds, as regards the Orange district, a mortality of 1 in 1,275. But when we remember that, whether rightly or wrongly, Orange has been a place to which many metropolitan medical men have sent cases of phthisis, either from home or other parts of the colony, or even other colonies (and even in my restricted early experience, for the years under review cover the first two and a-half years of my sojourn here, three imported cases died), one can understand that a grave deduction has to be made on this score from the rate above specified. No doubt similar deductions will be called for from other centres alluded to, but the result will, I think, show that the greatest deduction exists in places which are most thought of and valued for their climatological advantages. This is on the principle that the medical man who has the greatest reputation for skill and success is often one who has a larger death-rate than another with a smaller or no reputation in that direction, simply because the more numerous serious cases go to him for relief. And so with a district which has a reputation for health-giving properties.

My opinion, then, is that before any definite conclusion as to the value of district or colony can be arrived at, we must distinguish between imported cases and those which arise in a place itself, either in natives or those long resident therein.

I am sorry to be unable to give any further figures than my own at present, but I hope in a future contribution to be able to supply such, with the hope that medical men in other districts will thereby be led to do the same.

Dr. H. Brown, of Molong, which place, it will be observed, has a very good place indeed in Dr. Mullins' list, I believe claims a pre-eminence for it on more extensive grounds than merely that of phthisis. One would like to see these before the profession.

I am sure Dr. Mullins' paper should elicit a good deal of discussion, and it is in the hope of its doing so that I venture to write at such a length, and I hope the importance of the matter will lead to more activity on the part of the profession than in the past.

Before closing, I crave leave to allude to a different matter, viz., a query of Dr. Quaife's on my paper. Understanding him to enquire as to sanitary arrangements, and not sanitary condition, I answered as reported. But, seeing what his question really was, I take this opportunity of saying that for some months past our sanitary condition as regards typhoid has been good. We are free from it at present.—Yours, etc.,

G. A. VAN SOMEREN, M.D.

Orange, N.S.W., Sept. 4, 1895.

THE ADVENTITIOUS SAC OF HYDATID CYSTS.

(To the Editor of the Australasian Medical Gazette.)

SIR,—In Dr. Lendon's interesting clinical lecture on "Hydatid Disease," published in your July issue, the lecturer discusses the origin of the adventitious sac, and objects to its being regarded as the product of tissue "irritation," and analogous to the fibrous capsule formed round any other foreign body, such as a bullet. A footnote refers the reader to my article in the February number of the *Intercol. Quart. Journ. Med. Surg.*, so I may perhaps be allowed space for one or two comments. Dr. Lendon doubts "whether it is fair to charge a *living** hydatid cyst with the offence of irritating the surrounding tissues." Why a foreign body should be less irritating because it is living is not quite clear. On the contrary, I hold that it is all the more irritating, because, in addition to being foreign, it has the further irritating attribute of progressively enlarging, which must obviously be a constant cause of stretching and disturbance of the tissues in which it lies. An examination of the lecturer's own words seems to furnish abundant evidence adverse to his own contention. Thus he says, "Although in one sense a foreign body or intruder, in another sense the hydatid is an accepted guest, even if an unwelcome one, and the organ or structure in which it develops, so far from resenting its presence, performs its duty as a 'host,' &c." I would ask whether this picture of a host entertaining an unwelcome guest is not strongly suggestive of some degree of "irritation" being experienced by the host. Dr. Lendon then proceeds to speak of the amicable relations existing between cyst and sac until *something* occurs to cause the death of the former. "It is only now that the sac, no longer required to supply nourishment to the hydatid, can be said to act merely as a capsule, &c." I am inclined to think there may be a confusion between cause and effect here. Do the vessels disappear and the sac degenerate into a fibrous capsule because the cyst has chanced to die? or is it that the fibrous constituents of the sac, characterised by a constant tendency to contract, as are all fibrous structures produced by tissue irritation, reaches a stage when the vessels become obliterated, and the cyst consequently dies? This seems to me the more rational of the two views. Having expressed his opinion that the development of the cyst does not irritate the tissues which surround it, the lecturer proceeds to tell us what it really does, as follows:—"From the moment the embryo commences its development in the liver substance it exerts pressure upon, and causes atrophy of, the parenchymatous cells in its neighbourhood, and obliterates some of the smaller blood-vessels and bile-ducts, &c." Dr. Lendon holds that all this is

*All italics are mine.

accomplished without any tissue-irritation, and that the fibrous sac consists merely of the condensed interlobular and intralobular connective tissue, *without any fresh development of fibrous tissue*. That this view should be upheld by one who must have often seen the enormous sac of a large hydatid cyst of the liver, which has, in Dr. Lendon's own words "*stretched the liver capsule and its peritoneal covering*" until it reaches even to the pelvis, is bewildering. I feel confident this cannot be what Dr. Lendon really means, yet it is the only deduction I can arrive at from his words, as reported. The real difficulty seems, after all, to lie in the meaning of the term, tissue-irritation." The meaning I assign to it is simply the effect which a foreign body has upon the tissues in which it is embedded, which effect is made manifest by connective-tissue proliferation. I do not understand or wish to imply that inflammation enters into the process at all, and it is probably over the exact significance to be attached to the word "irritation" that the real difference of opinion has arisen. It is eminently desirable that we should be as clear as possible about these fundamental points, which is my only reason for writing this letter. I am sure I need not disclaim the wish to carp at Dr. Lendon, whose authority in these matters I hold in the highest and most deserved estimation.—I am, sir, &c., &c.,

R. HAMILTON RUSSELL.

Melbourne, August 8th, 1895.

A CORRECTION.

(To the Editor of the Australasian Medical Gazette.)

DEAR SIR,—The case I showed at the last reported meeting of the New South Wales Branch of the B.M.A. was incorrectly recorded in the journal as one of cholesterol crystals on the posterior surface of the lens.

The crystals, which were very numerous and evenly distributed, were in the deeper layers of the cornea, or on its posterior surface, and apparently a few on the iris, which was atrophic, tremulous, and adherent to the opaque lens, the eye being absolutely blind.

As the interest of the case lies in the position of the crystals, I should be obliged if you would publish this correction. Though the occurrence of cholesterol in many other parts of the eye (vitreous, lens, retina, iris, and anterior chamber) is not uncommon, neither I nor any of those who have examined this eye have ever previously seen cholesterol in the cornea, and I can find no mention of its occurrence in this situation in any of the books at my command.

The patient consulted me because of sudden blindness in the other eye, due to extensive hæmorrhage (without evident cause) into the vitreous.—Yours etc.,

F. ANTILL POCKLEY.

227 Macquarie Street, Sydney, 12th August, 1895.

SCARLATINIFORM RASH IN INFLUENZA.

(To the Editor of the Australasian Medical Gazette.)

SIR,—In the B.M.J., vol. i., 195, p. 563, records are requested. Here is one:—G. S., a lad of 16, in Marickville, was attacked with influenza on July 31. The body was marked with profuse urticaria on August 1. A generalised scarlatiniform eruption, through which the urticarial wheals showed up, appeared on August 2. The wheals were gone on August 3. The scarlatinoid punctated rash was gone on August 5. He had no sore throat, enlarged glands, nor "strawberry tongue," and is convalescent.—Yours truly,

WALTER SPENCER.

Enmore, near Sydney, August 7, 1895.

HUXTABLE MEMORIAL FUND.

THE following gentlemen have subscribed to the above fund since the last notice:—Drs. Lennhoff, Rennie, Chambers, Paton, English, Lockhart Gibson (Brisbane), MacCormick, Manning, Evans, Jamieson, Pockley, Pickburn, G. A. Marshall, Pentland, Gore-Gillon, Hoets, C. D. Clark, Jarvis Hood, T. M. Martin, Wilkinson, A. J. Brady, MacCulloch, MacDonald (Ingham, Q.), Odillo Maher, Kenna, McMurray, and H. H. Marshall, Capt. Carvoso, Mr. A. D. Walsh, Mr. N. Walsh, and Messrs. Angus and Robertson.

WM. H. CRAGO, Hon. Treasurer.

REVIEWS.

FORMULAIRE DES SPECIALITES PHARMACEUTIQUES, COMPOSITION, INDICATIONS THERAPEUTIQUES, MODE D'EMPLOI ET DOSES: A L'usage des Médecins par le Docteur M. Gautier, Ancien Interne des Hôpitaux, et F. Benault, pharmacien de 1^{re} classe, Lauréat de l'Ecole de Pharmacie. Paris: Librairie J. B. Baillière et Fils, 19 Rue Hautefeuille, près du boulevard Saint-Germain, 1895.

As most elegant articles are of French origin, it was naturally to be expected that elegance in the pharmaceutical preparation of drugs possessing various drawbacks, e.g., nauseousness, insolubility, incompatibility, &c., would predominate in France. The small volume under notice contains upwards of 1,500 preparations specially put up by French pharmacists to suit certain requirements of the prescribing physician, which are mostly endowed with the name of the maker, e.g., *Eau de mélisse Boyer*, and are got up in the most elaborate manner. The mode of preparation is not given, the contents only roughly stated, whilst the indications and doses, &c., are given more extensively. Doubtless many of the preparations are patented according to the French law, and the mode of preparation is the secret of the maker, hence more information cannot be given; but the system of prescribing such combinations and patent drugs is not in favour in England, nor in the Australian colonies, for that matter, so the otherwise handy and well-compiled little book will be of no use to us out here, except for reference and as a curiosity. Many of the articles could not be obtained here unless sent out specially from France. A word of praise is owing for the very useful therapeutical and pharmaceutical indices at the end of the book, and the chapter on the use of anti-diphtheritic serum (anti-toxin de l'Institut Pasteur) is perhaps the most valuable in the book. The various articles are arranged in alphabetical order, as in Martindale's work, "The Extra Pharmacopœia," but without the circumstantiality of this great "physician's aid." There is no hesitation about the authors when recommending even a notorious patent medicine, the "Liquor du Dr. Laville," to wit, which they say is "le médicament par excellence des accès de goutte franche," quoting Lécorché and Brown-Sequard in support. The liquor is said to contain "d'hermodactylus, convallaria, gentiana, scilla, fraxinus, quina;" of opium and colchicum, two of the chief constituents, at any rate of the samples sold out here, there is no mention at all. On going carefully through all these preparations, it seems a pity that so much ingenuity should be wasted in devising combinations that the physician ought to be competent to prescribe without resorting to the assistance of patent medicines and the pharmacist every now and then. However, different countries have different systems, and these can only be criticised when they more nearly approach our own.

THE URINE IN HEALTH AND DISEASE, AND URINARY ANALYSIS, PHYSIOLOGICALLY AND PATHOLOGICALLY CONSIDERED. By D. Campbell Black, M.D., L.R.C.S., Edin., F.F.P. and S., Glas., Professor of Physiology in Anderson's College Medical School, Physician to the Glasgow Public Dispensary. London: Baillière, Tindall & Cox, 1895.

A VERY handy little volume, containing within some 250 pp. everything that a hospital student or a young practitioner requires to know concerning the urine and the methods of arriving at data concerning its normal and pathological conditions. In dealing with abnormal constituents of the urine, the author gives every constituent a description to itself, and considers, *seriatim*, its properties, tests, pathological significance and therapeutical indications. "Albuminuria" is treated most exhaustively in this manner, and no literature, English or foreign, that has any bearing on the subject at all, has been neglected. In treating of the microscopy of sediments, very many excellent and distinct illustrations are given of cells, casts, crystals and parasites found in morbidly altered urine. The figures are all large and well drawn. A chapter on the anatomy and physiology of the kidneys is introduced at the commencement of the volume and enhances its value immensely, being succinct, and, above all, up to date. Few more useful works than this have seen the light of day for the last twelve months, and it is quite refreshing to have to deal with something that bears the impress of originality and research, for which reason we heartily recommend the work to our readers.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during July to every 1,000 of the population was 2·84, and of deaths 1·15. The deaths of children under five years of age during the month were 151, or 31·07 per cent. of the total, 106 being under the age of one year. Twelve deaths of child-bearing women took place during the month, or one death of a woman to every 100 births recorded.

THE Admiralty have confirmed the sentence of the court-martial held in Sydney in May last on Francis J. Lea, the surgeon of H.M.S. "Ringarooma." Dr. Lea was charged by Captain Johnson with being guilty of contempt to his superior officer and insubordination, and, the charge being held to be proved, was dismissed from the service.

THE honorary medical staff of the Sydney Hospital intend to erect a tablet as a memorial to the late Dr. Huxtable in the hospital chapel.

ROBERT HODGSON ANDERSON, M.B. 1893, Ch.B. 1894, Melb. Univ., surgeon of the ill-fated steamer "Catterthun," which was wrecked at Seal Rocks on the New South Wales coast, on August 8th, was a native of Victoria. He practised at Mirboo North, Gippsland, for about a year and a-half, and left for Newcastle about three months ago to secure the position of medical officer of the Newcastle Hospital; but, not being successful, he acted as *locum tenens* for Dr. Hester, of Stockton, for some weeks, and finally accepted the post of surgeon to the "Catterthun." He was only 24 years of age.

JAMES ABERDEEN JONES, L.R.C.P. et R.C.S. Ed. 1869, who for many years practised at Balmain (Sydney), died of apoplexy at Aberayron (Wales) on July 11, aged 58 years.

ARTHUR HENRY NORMAN, L.R.C.P. et R.C.S. Edin. 1877, who practised at Bourke for the last three years, died there from influenza on August 9th. He has left a family of eight children.

MORGAN O'CONNOR, M.R.C.S. Eng. 1855, died at Wagga Wagga on August 18th, at the age of 66, from the effects of a fall in March last, when he broke his thigh. Dr. O'Connor practised at Yass from 1860 till 1874, when he removed to Wagga, where he resided ever since. The deceased gentleman was a Knight of the Golden Spur, conferred on him by the Pope in 1874.

DR. R. LEE BROWN has commenced practice in King-street, Newtown (Sydney).

DR. D. COLLINGWOOD, of Summer-hill, has returned from his trip to England.

DR. A. M. GLEDDEEN, late of West Maitland, has been unanimously elected medical officer to the Miners' Association at Minmi. There were 15 applicants for the vacant position.

DR. W. H. GOODE has been appointed an Official Visitor to the Hospitals for the Insane at Gladesville and Callan Park; and Dr. Alfred Hewen an Official Visitor to the Hospital for the Insane at Parramatta, and the Licensed House for the Insane at Cook's River, in the room of Dr. Huxtable, deceased.

DR. A. JARVIE HOOD, of Sydney, has removed from Elizabeth-street to 219 Macquarie-street.

DR. A. JARVIE HOOD has been elected honorary physician to the Sydney Hospital, in the place of the late Dr. Huxtable.

DR. R. R. S. MCKINNON, of the Prince Alfred Hospital, Sydney, has been elected Medical Officer of the Warialda Hospital.

DR. GORDON MACLEOD has been appointed an honorary assistant ophthalmic surgeon at the Sydney Hospital.

DR. A. W. NASH has resumed practice at Robertson.

DR. E. L. PIERCEY has commenced practice at Strathfield, a fashionable suburb of Sydney.

DRS. G. H. WALTON SMITH (of Paddington), W. M. Helsham (of Richmond), and Leslie J. Lamrock (of Waverley) have been appointed Honorary Surgeon-Lieutenants in the New South Wales Military Force.

DR. R. W. THOMPSON, late of Dungog, left for England by the "Gulf of Lyons."

DR. W. R. TOMLINSON, formerly of Townsville, has succeeded to Dr. Herriot's practice at Moree.

DR. A. E. WOODFORD, formerly of Walgett, has commenced practice at Glen Innes.

NEW ZEALAND.

THE proportion of deaths registered during July to every 1,000 of the population was 0·98 for Auckland and suburbs, 0·75 for Wellington with suburbs, 0·92 for Christchurch and suburbs, and 0·76 for Dunedin and suburbs. The total births in these four boroughs during July amounted to 377, against 320 in June. The deaths in July were 147, to which males contributed 81 and females 66. Thirty-two of the deaths were of children under 5 years of age, being 21·77 per cent. of the whole number; 26 of these were under 1 year of age.

THE death is announced of Dr. Johann Peter Ernst Ferdinand Johansen, M.D. Berlin 1872, who died at Richmond (Prov. Nelson) a few months ago, at the age of 48.

DR. J. M. BARNES, late of Levuka (Fiji), is now residing in Dunedin.

DR. M. CAMPBELL, has commenced practice at Patea, 66 miles S.E. of New Plymouth.

DR. H. D. DAVENPORT has removed from Ohingaiti (Hawke's Bay), to Hunterville (Prov. Wellington).

DR. R. VON MIRBACH, late of Waipawa (N.Z.), left Sydney for Europe by the German mail steamer "Prince Luitpold," on August 13th.

DR. H. R. SLOAN, a recent arrival, has commenced practice at Hawera.

SOUTH AUSTRALIA.

At the Adelaide Criminal Court on August 7, a man named Friessbourg, notorious in most of these colonies, was charged with unlawfully uttering a forged doctor's diploma. According to the evidence, Friessbourg stole a medical diploma of Dr. M'Kay, of Victoria, and, after inserting therein his own name in place of that of Dr. M'Kay, presented it to the Medical Board of South Australia, and was then registered as a member of the medical profession. He was found guilty, and sentenced to 10 months' imprisonment.

DR. D. T. HARRISON has been appointed Acting Medical Officer at the Wallaroo Hospital during the absence, on leave, of Dr. Gosse.

TASMANIA.

To every 1,000 of the population of the two chief cities, the proportions of births registered were as follows:—For Hobart, 2.52; for Launceston, 1.96; all, 2.30; and of deaths, 1.53 for Hobart, and 1.26 for Launceston. The deaths registered in July in Hobart and Launceston numbered 84—47 males and 37 females; 31 deaths, or 36.90 per cent. of the whole, took place in public institutions. The deaths under five years of age numbered 15, or 17.86 per cent., of which seven were under one year of age.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during July to every 1,000 of the population was 27.68, and of deaths 16.66. Males contributed 54 per cent. and females 46 per cent. to the mortality of the month. Children under five years of age contributed 27 per cent. to that mortality, as against 27 per cent. in July, 1894. One hundred and thirty-nine deaths, or 22 per cent. of the whole, took place in public institutions.

A PUBLIC meeting, held in Melbourne on August 19th, under the auspices of the Anti-Vaccination League, unanimously passed a resolution protesting against compulsory vaccination as unwarrantable and a cruel State interference with parental and personal rights. About 200 attended the meeting.

THE election of the honorary medical staff of the Melbourne Hospital took place on August 15th, and caused considerable excitement; the result was the re-election in every instance of the old members of the staff. The following are the votes polled:—*Surgeons to In-Patients*—Mr. R. A. Stirling 2,632 votes, Mr. T. N. Fitzgerald 2,310, Mr. F. D. Bird 2,278, Mr. C. N. Ryan 2,249, and Dr. W. Gardner 1,084 votes. The first four were elected. *Physicians to In-Patients*—Dr. J. Williams 2,674 votes, D. J. W.

Springthorpe 2,481, Dr. J. R. MacInerney 2,331, Dr. P. Moloney 1,962, and Dr. D. Grant 1,761 votes. The first four were elected. "A humorous feature of the day (says the *Age*) was the appearance in Collins-street of a small cart holding a diminutive boy, who drove a little donkey; the whole turnout being placarded with invitations to vote for Dr. Gardner and Dr. Hughes (one of the candidates for the post of out-patient physician). This equipage, which strongly resembled a travelling advertisement for a fancy-dress football match, is emphatically disowned by both the candidates mentioned, who, in fact, declare that it was a device of some opponent intended to injure their candidature."

DR. S. C. JAMIESON has left Melbourne for Hobart, to act as assistant to Dr. E. L. Crowther.

DR. W. J. LONG, formerly of the Melbourne Women's Hospital, has been appointed Resident Surgeon at the Bendigo Hospital, in the place of Dr. Peebles, resigned, and Dr. J. Buick, of Ravenswood, has been appointed Assistant Surgeon.

DR. A. LURZ has returned from his trip to Europe, and resumed practice at Collins-street, Melbourne.

DR. PHIL NUTTING, of Caulfield, has left for the old country.

MEDICAL APPOINTMENTS.

Ames, James, M.B., to be Public Vaccinator for Richmond, Vic.
Davenport, Harold Devereux, L.R.C.S. I., to be a Public Vaccinator for the district of Hunterville, N.Z.
Dickins, Frederick Waltham, M.B., to be Health Officer for Lilydale shire, Vic.
Donovan, Philip Henry, M.B., to be Health Officer for Bet Bet shire, Vic.
Fullerton, Robert John, L.R.O.P., to be Health Officer for Narracan shire, Vic.
Hamilton, Alfred James, L.R.C.P., to be Health Officer for Mansfield shire, Vic.
Honman, Andrew, M.R.C.S.E., to be Health Officer for Williams-town, Vic., vice J. Johnston, M.B., resigned.
Joyce, Alfred Fleming, M.B., to be Public Vaccinator for East Brighton, Vic.
Naylor, Arthur George Eyre, L.R.C.P., to be Health Officer for Dunmunkie shire, N.B., Vic.
Thrower, William Robert, L.R.C.P. and R.R.C. Ed., to be a Public Vaccinator in South Australia.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

ETHERINGTON.—On the 26th August, at Rockdale, N.S.W., the wife of Henry B. Etherington, M.B., of a daughter.
KENNEDY.—On the 3rd August, at Lisfarron, Cobram, Victoria, the wife of Dr. J. T. Kennedy, of a son.
MORTON.—On the 18th August, at Fitzroy, Vic., the wife of Dr. F. W. Morton, of a son.
OWEN.—On the 25th August, at North Fitzroy, Vic., the wife of F. J. Owen, M.D., of a daughter.

MARRIAGES.

COOPER—MAYHEW.—On the 20th June, at St. Peter's Church, Springburn, Q., Dr. H. Brakine Cooper, to Lillia, fourth daughter of D. E. Cayendish Mayhew, Old Southgate, England.
HALFORD—IRVINE.—On the 14th August, at the Presbyterian Church, Armadale, Vic., George Billing Halford, M.D., to Helen Francis, third daughter of the late Major-General Alexander Irvine.
HESTER—SMITH.—On the 21st August, at Gundagai, N.S.W., Jeaffreson William Hester, M.B., of Stockton, N.S.W., to Laura Ellinor, eldest daughter of W. B. Smith, of Gundagai.
HUGHES—ROFE.—On the 21st July, 1895, at St. Andrew's Cathedral, Sydney, N.S.W., Dr. J. Ford Hughes, of Bungendore, to Minnie Gertrude Rofe, of Petersham.
KNOWLES—SHERIDAN.—On the 16th August, at All Saints', Petersham, N.S.W., George Knowles, M.B., C.M., of Georgetown, Q., to Adèle Maude Bingham, eldest daughter of Henry A. Sheridan, Newtown.

DEATH.

WADHAM.—On the 1st September, at Strathfield, N.S.W., Mary, wife of Fredk. Wadham, F.R.C.S. Eng., in childbirth.

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

SEVEN CASES OF LAPAROTOMY FOR INTUSSUSCEPTION IN VERY YOUNG CHILDREN.*

By C. P. B. CLUBBE, L.R.C.P. LOND.,
M.R.C.S.E., HON. SURGEON TO PRINCE
ALFRED HOSPITAL, HON. SURGEON SYDNEY
CHILDREN'S HOSPITAL.

THE seven cases of intussusception in which laparotomy was performed that I wish to bring before your notice to-night all occurred in very young children, not one of them being over six months at the time of the operation.

The first six cases were in the Children's Hospital, and four of these recovered. The last was at Prince Alfred Hospital, and it died after living four days.

I will briefly relate the cases in the order in which they occurred.

CASE I.—Richard C., aged six months; admitted to Children's Hospital August 24th, 1898. Has been vomiting, and has passed nothing but blood and slime since last night. The child was somewhat collapsed. There was an elongated tumour on the left side of abdomen, and by rectum a mass could be felt. Under chloroform, warm oil was injected, and this had the effect of pushing up the mass, so that it could no longer be felt, and also of reducing the size of the tumour in abdomen. As it was clear reduction had not taken place, laparotomy was performed at once. The tumour was found at the splenic flexure of the colon, and consisted of cæcum and ascending, and part of transverse colon. It was reduced easily enough by squeezing until cæcum was reached, and this only unfolded itself after a considerable amount of coaxing. So much pressure had to be put on the intussusciptions that the serous coat of the bowel was torn in two or three places. The cæcum and vermiform appendix were very dark in colour, and felt hard. There was some little difficulty in returning the small intestines. Soon after the operation 15 gr. morphia was given to the child hypodermically.

August 26th.—The child doing well. Has had two motions, slightly blood-stained; vomited, but very little. I will not weary you with the subsequent history of the case. The recovery was

interrupted by a pneumonia at right base on the fifth day after the operation, but in spite of this the child ultimately got quite well. I showed this child at one of the meetings of this Branch in Oct., 1898.

CASE II.—Ida C., aged four months; admitted to Children's Hospital Sept. 19th, 1894. Said to have been quite well till yesterday, when it suddenly turned white, drew up its legs, and screamed; afterwards attempted to vomit; passed blood and slime by bowels, and has been passing this frequently since; seems to be in less pain to-day.

A well-nourished, vigorous child; abdomen not distended; it is doubtful if there is pain on palpation; no tumour to be felt, and nothing by rectum.

At 4 p.m. had an anæsthetic; abdomen palpated without anything being felt; child inverted, and large enema given.

Sept. 20th.—The child in same condition; laparotomy at 4 p.m.; cæcum found in colon, about three inches, reduced without difficulty; cæcum much congested. There was great difficulty in returning the small intestines, and the abdominal wound had to be enlarged.

The child died at 3 a.m. on the 21st, 11 hours after operation. T. 105° just before death.

CASE III.—John L., six months; admitted to Children's Hospital Oct. 10th, 1894. The child was taken suddenly ill last night; was given some castor oil, and vomited; then began to pass some blood; child has been straining all day.

Child well-nourished; does not look very ill; abdomen slightly distended; no tumour to be felt; nothing per rectum. Under an anæsthetic a large enema was given, and considerable pressure was put on; the oil returned as it was injected, and some blood and mucus followed; no fæces. Laparotomy was proceeded with at once. There was some fluid in the abdominal cavity. The intussusception was found on the right side, and was the cæcum into the ascending colon. It was reduced in the usual way by squeezing, without much difficulty. The child vomited a good deal for the first few hours after the operation; passed a motion 12 hours after; the child did well till Oct. 16th, six days after operation, when, as there was a good deal of redness of skin caused by dragging of deep sutures on each side of wound, some of these were removed.

Oct. 17th, 24 hours afterwards, when the child was straining or coughing, about three inches of gut came through the wound. This was returned as soon as possible, and the opening plugged with gauze. About an hour afterwards, under an

* Owing to an oversight on my part in not returning the proof, this paper appeared uncorrected in last month's issue, and I am indebted to the Editor for his courtesy in having it reprinted.
—C.P.B.C.

anæsthetic, the wound was opened up, and the peritoneum was brought together again in the usual way with deep (silk-worm gut) sutures.

After that the child did well, and was discharged cured Nov. 26th.

CASE IV.—Irving C., aged four months; admitted to Children's Hospital December 9th, 1894. The history was that three days before admission the child had cried with pain. Soon afterwards it began to pass blood, and had been vomiting constantly. No definite tumour to be felt in abdomen by palpation. A mass could be felt in rectum. Under an anæsthetic, a large enema of oil was given. On opening the abdomen, which was done at once, the cæcum, ascending transverse and descending colon were found in the rectum. It was reduced with difficulty. The cæcum was very congested, and quite hard. After reducing the intussusception there was a very great difficulty in returning the small intestines to the abdominal cavity, because they were so much distended. The gas from some of these distended coils was let out by means of a hollow needle. The puncture wound was caught by fenestrated forceps, and tied with fine catgut. The child did not rally after operation, and died in three hours. Passed a large motion without blood just before death.

CASE V.—David D., aged four months; admitted to Children's Hospital December 20th, 1894. The history was that the child had had some diarrhoea on the previous day. The motions were green, and contained curds. At 10 p.m. it had refused the breast, and became restless, and cried as if in pain. Oil was given by mouth, and an injection of soap and water. The motion that resulted was streaked with blood. It has vomited several times, and keeps passing blood.

On examination.—The child was fairly well nourished. Does not seem to be distressed. There is some resistance in the left iliac fossa, and a mass can be felt by rectum. Under chloroform, a definite, sausage-shaped tumour on the left side of abdomen was easily made out.

A large injection of oil was given, and this evidently partially reduced the intussusception, for the tumour became much smaller, and could now be felt in region of transverse colon. On opening the abdomen the tumour was found in the transverse colon, and was reduced with difficulty. The cæcum was very dark, and felt hard. Ti. opii. in drop-doses was given soon after operation, and in the first eight hours the child took eight drops. This was given because the child was restless, and seemed to be in pain. No vomiting.

December 23rd.—Child had two good motions after calomel gr. i. From this time it slowly convalesced, and was discharged March 5th, 1895.

This child has been suffering from marasmus more or less ever since, and has been readmitted in order that it may be properly dieted.

CASE VI.—Reginald P., aged three months. This child was brought down to my house from Bowral on the afternoon of April 19th. The history was that four days ago it had an attack of diarrhoea. Last evening it was suddenly seized with vomiting, and blood and alime appeared in the motions. The mother thought it had dysentery. The child was fairly well nourished. It looked ill, but was not collapsed. I could feel a sausage-shaped tumour on right side of abdomen. I sent it at once to the Children's Hospital. Under chloroform a large enema of oil was given, but it did not reduce the intussusception.

On opening the abdomen the tumour was found in the right side, and was reduced easily. The vermiform appendix had been so much pinched that I removed it.

This child made a quick recovery, and was discharged May 5th, 1895.

CASE VII.—Thomas Holmes, aged four months; admitted to Prince Alfred Hospital June 5th, 1895. History: Said to have had a sudden attack of pain two nights ago. Has been passing blood and mucus by bowels.

On examination of abdomen, an elongated tumour to be made out on left side, by rectum most to be felt.

Abdomen opened in middle line. Colon from cæcal valve found to be intussuscepted; reduced easily. Nearly all the small intestine was collapsed. In this case no enema had been tried before section, and on this account there was a little trouble in getting behind the mass in the rectum, to begin the squeezing process. This was got over by getting an assistant to pass his finger into the rectum to push the mass up a little. After the operation the child was somewhat collapsed, but picked up during the evening. It had three motions during the night. This child seemed to be doing well for three days, then began to fail, and died on the evening of the fourth day. At P.M. there was some slight peritonitis and enteritis. The cæcum was somewhat discoloured. The greater portion of the small intestine was collapsed.

In the *Lancet* for August 11, 1888, Mr. A. Barker has a paper on Intussusception. (Whenever this subject has been written about or discussed since that date this paper has been referred to). Mr. Barker collected 78 cases that had been treated by laparotomy; 60 died, and 18 recovered. In only 34 of these cases could the bowel be released. Twenty-three were children, 5 recovered, and 18 died; 11 were adults,

7 recovered, and 4 died. So that in children the mortality was very much higher than in adults—78·2, compared with 26·3. Up to that date, then, only five children were known to have recovered after this operation.

In going through the *Lancets* and *British Medical Journals* since Mr. Barker's paper, I can only find records of eleven recoveries in children from laparotomy for intussusception. And one of these was done in Melbourne by Dr. Snowball, another in Tasmania by Dr. Percival. The percentage of recoveries in my cases compares favourably with any that have hitherto been recorded. So far as they go, they are encouraging, and they are a proof, if proof be wanted, that very young children are able to bear the shock of an abdominal section.

Should we do laparotomy in these cases? The writer on intussusception in the "American Text-book of Diseases of Children, 1894," says No. "In cases of acute intussusception," he says, "it has no effect in diminishing the death-rate. The objections to the operation in acute cases are that there is a reasonable chance of recovery without it, and that at the early age at which intussusception usually occurs renders operative interference peculiarly dangerous."

He goes on to say, "I am well aware that a few brilliant results from laparotomy in infants have been recorded by Mr. Hutchinson, and the late Dr. Sands, of New York, and other operators, but these cases should be regarded as surgical curiosities, showing what infants may sometimes safely endure, rather than as furnishing precedents for future guidance."

Every now and again these cases of intussusception are certainly reduced by rectal injections of either oil, water, or air given with an ordinary enema syringe. Many such cases have been recorded. I had a case only a few weeks ago at the Children's Hospital that was reduced in this way. But we must always remember that there is an element of danger in these rectal injections. It is very difficult to regulate the amount of pressure we put on the gut, and if it is weakened at any point by ulceration it may give way. Mr. Hurry Fenwick records such a case in *British Medical Journal* of May 11 of this year. The child was six months old, and was admitted to London Hospital, March 15, 1895. A sausage-shaped tumour could be felt in the left lumbar region, and a mass could be felt in the rectum, high up. The child was placed under chloroform, inverted, and turned somewhat to the right. A small, soft rectal tube, with funnel attached, was used, and the drop employed to distend the colon was never more than three feet. Three pints in all were injected, a pint at a time, the colon

being thrice distended and allowed to relieve itself. After the third distension the intussusception could no longer be felt. As the child recovered from the anæsthetic only a portion of the last enema returned. In a quarter of an hour the intussusception could again be felt on the right side. The child died in an hour.

P. M.—A considerable quantity of grumous fluid was found in the peritoneal cavity. The intussusception was not fully reduced. There were two ulcers in the transverse colon. One had caused loss of substance down to the peritoneal coat; its floor was formed by a thin, white cicatrix the size of a pea. The other had been apparently very similar, but its base was now perforated, and replaced by a clean-cut hole. In this case there had been no history of "consumptive bowels," or chronic diarrhoea.

The operation itself is easy, and should, I think, certainly be done in all cases, no matter how young the child is, if we are certain that we have an intussusception that has not been reduced by the rectal injections. If the injections fail, *proceed at once* to the operation. Delay is fatal.

In Case No. 2 the child might have lived if I had operated at once, instead of waiting twenty-four hours. The difficulty in this case was that no tumour could be felt by abdominal palpation, even under chloroform, so that I could not be sure whether the intussusception was reduced or not without waiting to see if the symptoms abated. The next day the child was still vomiting, and passing nothing but blood and slime. So the operation was proceeded with, but the child died. In such cases it seems to me impossible not to err sometimes.

In none of these cases was a drainage tube used. In some of them the intestines were washed with warm Boracic lotion. Opium in some form was given to all of them for the first 24 hours. For the first 12 hours nothing but water was given. After that, Mellin's food and water for a few days, and brandy if necessary.

The after-treatment of these cases is very important, and skilful nursing has, I feel sure, a great deal to do with bringing them to a successful issue.

NOTE.—In the report of the discussion that followed the reading of the paper there is an error which I wish to correct. It was suggested that, in view of the danger of perforation, sterilized water should be used for injections. In reply, I am made to say, "No doubt sterilized water would suit as injections for reducing the intussusception." What I did say was this: "Sterilized water might be used for such injections, but that, if perforation took place, it would not prevent a

fatal result, because the peritoneal cavity would be flooded with the various micro-organisms that abound in the intestinal canal."—C.P.B.C.

October 4, 1895.

THE INTRA-PERITONEAL TREATMENT OF ABDOMINAL HYDATIDS.

READ BEFORE THE VICTORIAN BRANCH B.M.A.
BY CHARLES RYAN, HON. SURGEON MELBOURNE HOSPITAL, HON. SURGEON MELBOURNE SICK CHILDREN'S HOSPITAL.

SOME five years ago Bond, of Leicester, published the account of a case of abdominal hydatids in which, finding that he was unable to bring the adventitia up to the abdominal wall, and fasten it there after the method of Lindemann, he sewed up the opening in the sac after the cyst had been removed, and dropped the closed sac back into the abdominal cavity. He then completed the operation by closing the abdominal wound. The case did perfectly well, and the publication of the account of it attracted considerable notice at the time; and the method pursued in this case has ever since been designated Bond's method. At the same time the matter remained pretty much where Bond's communication left it. The method of operating was by no means generally adopted, and Lindemann's operation remained in almost undisputed possession of the surgical field in Australia. It is true that the intra-peritoneal method has been occasionally adopted, but the operation has been always looked upon with a certain amount of distrust, and any cases that have been performed successfully have been regarded rather as curiosities than as illustrating a method which should ever meet with any approach to universal adoption. It was not until the present year that the intra-peritoneal method has really come prominently under the notice of surgeons, and has been put forward on pathological grounds as the method which is to supersede all others in the treatment of uncomplicated hydatid cysts. In the *Intercolonial Quarterly Journal of Medicine and Surgery* of February last there appeared an article from the pen of my colleague, Mr. Hamilton Russell, which promises to be productive of a weighty result in the surgery of hydatid disease. In this article the writer unhesitatingly condemns Lindemann's operation as applied to uncomplicated hydatid cysts, and maintains that the treatment of the adventitious sac by suturing it to the external wound and draining it is illogical and absurd. He points out that there is absolutely no reason for treating the sac with

this amount of consideration, that for all practical purposes the sac is only the capsule which necessarily forms round a foreign body, and that when the foreign body which has excited its formation has been removed the adventitious sac may be disregarded and dropped back into the depths of the wound, and the wound closed completely as after any ordinary abdominal operation. Mr. Russell discusses the objections which have been urged against this method. The first and most obvious one that has been put forward is that the fluid poured out from the adventitia will escape into the peritoneal cavity. His answer to this is, in the first place, that there would seem no reason to suppose that any large amount of fluid will be poured out by the adventitia. In the second place, that the best thing that could happen to any fluid so poured out would be that it should escape into the peritoneum, for, being an aseptic fluid, it could do no harm to the peritoneum, but would be rapidly removed by absorption. In this also lies one of the chief objections urged by Mr. Russell against suturing the opening in the sac—as was done by Bond—for the sac, being a structure which has absorptive powers which are very inferior to those of the peritoneum, the fluid would not be removed so rapidly, and would consequently be in a much more favourable position for the occurrence of decomposition, should the elements of septic change have been unfortunately introduced at the time of the operation. Mr. Russell further deals with the question as to whether the dropping back of the adventitious sac can be expected to lessen the amount of discharge thrown off from its surface; and he maintains that there is reasonable ground for this supposition, and adduces interesting evidence to this effect. The question assumes a more complex and difficult aspect when, in dealing with hydatid cysts of the liver, one is brought face to face with the important question as to what will occur should bile escape from a bile-duct into the sac. Here the author of the paper referred to confesses that he stands in a difficulty, and is unable to do more than express a somewhat hesitating opinion. But, at the same time, he puts forward the view that the intra-peritoneal treatment of the sac will reduce to a minimum the probability of bile escaping. As a matter of fact, when he wrote the article he had not at command any material data to aid in deciding this matter. These data which I am able to give you to-night are even yet quite inconclusive on this point, and such as they are they have accrued since the publication, and largely as a result, of the article to which I have

been referring. I had for a long time been aware of the views held by Mr. Russell, but had always regarded them with a certain amount of distrust until the experience which I am about to narrate, which struck me as very remarkable, and left no doubt in my mind as to the soundness and feasibility of Mr. Russell's views.

CASE I.—Christopher D., *æt.* 10, was admitted to the Children's Hospital in July, 1893, with a large hydatid cyst of the liver. The cyst was single, and uncomplicated, and Mr. Russell suggested the adoption of the method since described by him; but I shrank from what seemed to me to be the running of a needless risk. Eventually, at the operation, which was performed in the ordinary way up to the removal of the mother cyst, half persuaded, I cut off a large portion of the sac and put a few sutures into the opening—which I must confess I knew to be quite ineffective—then dropped the adventitia back, and closed the abdominal wound. The anxiety I felt for the next day or two was groundless, for the boy made a perfect recovery, and was up in a fortnight. I felt certain that the operation I had performed in this case was in effect that advocated by Mr. Russell, and I resolved to give the method a bolder trial. I have since performed several such operations, and I will now give a short account of them. Two cases were detailed by me at a recent meeting of the Medical Society of Victoria, and will appear in this month's number of the *Australian Medical Journal*. The others are as follows:—

CASE II.—T. B., labourer, *æt.* 31; admitted to the Melbourne Hospital January 15th, 1895. There was a large tumour on the right side of the abdomen, apparently continuous with the liver dulness, and extending down almost to the umbilicus, and across the front of the abdomen towards the left. On January 17th I operated through a six-inch incision; the cyst was found to be on the convex surface of the liver, and 93 ounces of fluid were drawn off by aspiration after the cyst had been exposed. The mother cyst and all the membrane were then removed, and the whole cavity carefully cleaned by sponges on holders. During this stage there was a good deal of oozing from the walls of the sac, which was really the liver substance. The empty sac was left unsutured, and the abdominal wound was closed. The patient suffered from no bad symptom after the operation, and was discharged from the hospital, well, sixteen days after.

CASE III.—E. L., *æt.* 54, married. Admitted

to Melbourne Hospital Jan. 21st, 1895. On the right side, under the ribs, there was a rounded tumour continuous with the liver dulness, and extending towards the middle line.

On Jan. 25 I operated through a six (6) inch incision, and found a hydatid cyst presenting on the upper surface of the liver. The cyst was removed in the usual way, and the cavity was cleaned with sponges and wiped dry. The adventitia was then dropped back, and the abdominal wound closed. Eight days after the operation some disturbance was evident at the wound, and, on a couple of stitches being removed, bile was observed to flow. This discharge of bile lasted three weeks, after which it ceased, and the patient was quite healed, and discharged from the hospital seven weeks after the operation.

CASE IV.—Lizzie Mc., *æt.* 24. Admitted to Melbourne Hospital June 25th, 1895. She had a rounded swelling in the right hypochondriac region. The liver dulness extended up to the third interspace, and downwards towards the flank and across the mid-line. On June 28th I cut down through the rectus muscle, exposed the liver, and introduced an aspirating needle into the most prominent part, withdrawing about a pint of fluid. The cyst was then opened through the liver substance, and its contents evacuated. A bleeding vessel in the cut liver substance required a silk suture. The sac, having been thoroughly cleansed and dried with sponges, was dropped back, and the abdomen closed. The patient was quite well and able to go home in four weeks.

Such is my experience of this method of operating on abdominal hydatids. I think that you will all agree with me that it is a very satisfactory and encouraging experience. My own feeling is very strong that Lindemann's operation may now be relegated to the past for simple, uncomplicated, hydatid cysts. Of course there will still be a proper sphere for Lindemann's method, but it will be confined to cases of suppurating cysts, and perhaps for certain other exceptional cases. It is too early yet to say what the future may have in store for us, but the burning question which awaits solution in the matter of this operation is the question which hangs on the escape of bile into the sac after removal of cysts of the liver. Hitherto, in the few cases where this occurrence has supervened after the performance of this operation, no harm has resulted, and the results would even then appear to have been better than they would have been after Lindemann's method. But is it altogether safe, and shall we always be as fortunate as we have been hitherto?

I am obliged to leave this question unanswered. Nevertheless, I have no hesitation in expressing my admiration and gratification at this method of operating, which appears to me to be in suitable cases far superior to any that has gone before, and I have little doubt that it will take its position from this time onwards as the typical operation for hydatid cysts.

A CASE OF POISONING BY CARAWAY SEEDS.

By J. A. WHEELER, M.B., B.S. LOND.,
M.R.C.S.E., of TOOWONG (BRISBANE).

A WOMAN, *æt.* 36, who for some time past has been in the habit of chewing small, hard bodies, such as dry rice, sago, caraway seeds, &c., while at work, ate three ounces of caraway seeds one afternoon in the space of about an hour. She experienced no ill effects till about 24 hours afterwards, when she began to feel dull and depressed, and had some difficulty in collecting and concentrating her thoughts. She had been wandering a little in her speech, and was oppressed with a fear of impending death. When I saw her, about 27 hours after eating the seeds, her face wore an expression of extreme uneasiness; the cheeks were deeply flushed in circumscribed patches over the malar bones, the eyes were half closed, and the pupils were dilated and responded sluggishly to light. Vision was blurred, all objects appearing as if surrounded by a white mist. The tongue was slightly tremulous and clear, and the breath had a distinct, though not strong, odor of caraways. Speech was slow and hesitating, but clear and connected, and she seemed to require some time to realize the meaning of what was said to her. The pulse was 62 and full, and respiration was slow and deep. She was giddy and unable to walk or stand without support, and had a feeling of numbness in hands and feet. There was no headache, but she was restless and wakeful.

The treatment adopted was *pil. coloc. et hyoscy.*, gr. x., to clear out any remaining seeds, and a quarter of a pint of a strong infusion of freshly-ground coffee-berries was given every four hours. Under this treatment she had several hours' sleep during the night, and in the morning all symptoms had disappeared.

The interest of this case is in its extreme rarity. Caraways are not mentioned in any work on poisons to which I have been able to refer, and I believe no record of any other case exists. The symptoms are similar to what one sees in cases of overdoses of other essential oils of the same class.

SOME CLINICAL OBSERVATIONS ON DIPHTHERIA.

By W. F. LITCHFIELD, M.B., LATE HOUSE
SURGEON AT THE HOSPITAL FOR SICK CHILDREN, SYDNEY, AND LATE RESIDENT MEDICAL
OFFICER AT PRINCE ALFRED HOSPITAL,
SYDNEY.

(Concluded.)

THE URINE.

MANY interesting and important phenomena occur in connection with the urine in diphtheria.

Albumen was present in 80 per cent. of the cases from the observation of which these remarks are drawn. This percentage must be looked upon as too high for all cases, since hospital cases are above the average severity.

The albumen makes its appearance in the urine from the third to the sixteenth day of the disease; in the majority of cases, however, it appears from the fourth to the eighth day. In those cases where the albuminuria occurs for the first time later than the tenth day it is of small amount, and of short duration. The throat in these mild cases of albuminuria is usually clear before the albumen makes its appearance in the urine.

Albuminuria in diphtheria may last from two days to sixty-seven days, or perhaps longer. The average duration for the ordinary run of cases is twelve days. The amount of albumen present will be found to vary from the merest trace to a deposit equal to two-thirds of the urine.

Tube casts can be easily demonstrated in the early stage of all cases where the albumen forms anything like a heavy cloud. Hyaline, epithelial, and granular casts are seen, the epithelial variety predominating. Free renal epithelial cells are also seen, while blood cells are rarely present. The following is a ready method for demonstrating the presence of tube casts:—

Allow the urine to stand for some time in a conical glass, then take up some of the deposit, which is never very heavy, in a pipette, and let it run on to a glass slide. No coverglass is necessary, and if the slide be now placed on the stage of a microscope, and the low power used, the casts and cells can be seen floating about.

The casts will be found to disappear from the urine before the albumen, so that it is necessary to examine for them in the early stages of the albuminuria.

The amount of albumen present bears some relation to the severity of the primary disease, while the number of casts present is perhaps a better guide to the intensity of the attack.

Again, there is some relation between the albuminuria and post-diphtheritic conditions. In only one case, a boy aged 15 months, was there paralysis where albumen was persistently absent from the urine. Also in all those cases where the albuminuria was prolonged (30 to 60 days), there were severe paralytic symptoms.

Post-diphtheritic cardiac failure has never occurred in any case where albuminuria was not present. In one case, however, it was threatened, and in several cases there has been marked post-diphtheritic slowing of the pulse, without albuminuria ever having been present.

Anuria in diphtheria may result from three causes :—

1. From nephritis.
2. From post-diphtheritic cardiac failure.
3. From vasomotor paralysis of the renal vessels.

I have seen an example of partial anuria due to each of the above causes, but none of the forms are common. The case due to nephritis occurred in association with intense diphtheria poisoning, and there were superadded uræmic symptoms.

The example of anuria, due to vasomotor paralysis of the renal vessels, occurred in convalescence, and ended in recovery. In this case, on the 21st day of the disease, the urine passed was found to be scanty, and for the next fourteen days the quantity passed daily ranged from four to eight ounces. There had been a preliminary stage of albuminuria and pharyngeal paralysis, but at the time of the partial anuria the urine was free from albumen, and, beyond a loss of knee-jerk, there were no other paralytic symptoms.

An example of anuria occurred in association with post-diphtheritic heart-failure. In this case, however, there were also signs of a severe nephritis, and it is as well to say that anuria was not a symptom in any other case that died from post-diphtheritic heart-failure.

PARALYSIS.

A very varied assortment of phenomena are seen as the result of the paralysis of diphtheria.

The following may be taken as a rough index of the order in which the paralyses appear :—

1. Asthenia
2. { Post-diphtheritic cardiac slowing and asthenia
- { Palate paralysis.
3. { Ocular paralysis.
- { Paralysis of the laryngeal vestibule.
- { Paralysis of the constrictors of the pharynx
4. { " " limbs and trunk.
- { Visceral paralyses.

I have ventured to place *asthenia* amongst the

paralytic disorders of diphtheria, for, although the connection between the two is not obvious in the early stages, yet it is certainly not possible to draw the line in some cases between the early asthenia of diphtheria and a later, more profound asthenia, which is certainly due to nerve disorder. In the asthenia of diphtheria there is a want of muscle tone and nerve energy, and all degrees of this condition are seen from a simple prostration to an actual paralysis. Although the asthenia is the first paralytic symptom to appear, it is, except for the loss of knee-jerk in some cases, the last to disappear.

Post-diphtheritic cardiac slowing has been already considered, and I have merely placed it on this list since it seems highly probable that the condition underlying its production is of the nature of a nerve destruction.

Paralysis of the palate will not be further referred to here, for the investigation of this form of paralysis is not always satisfactory in children. It probably always occurs when there is paralysis of the laryngeal vestibule, and sometimes occurs without such.

I do not intend to discuss *ocular paralysis* for the same reason.

Paralysis of the laryngeal vestibule is more important, as its presence necessitates feeding with a tube passed into the œsophagus. The results are nasal regurgitation and the passage of fluid into the larynx on drinking. This latter causes coughing, or perhaps the fluid will come through the tracheotomy wound if one be present. In more advanced cases even semi-solids pass into the larynx, and when the constrictors of the pharynx become much implicated there is inability to swallow at all.

This form of paralysis occurred in 26 per cent. of the cases under consideration. This is, of course, too high for all cases. The date of onset has varied from three to thirty-three days from the beginning of the primary disease. More than half the cases, however, occurred before the twelfth day. This paralysis is found to last from five to forty-four days, but in the great majority of instances it passes off before fifteen days. The protracted cases will be found to be associated with other more severe paralyses. When once the paralysis goes, it does not return, and this is true of any form of diphtheritic paralysis.

Three things may be observed to influence the occurrence of diphtheritic paralysis—(1) The severity of the primary attack; (2) the age of the child; and (3) the individual susceptibility of the child. The more severe the primary disease the more frequent and the more severe will the paralytic sequelæ be. The younger

the child the more likely is there to be paralysis, and the earlier do they appear. Lastly, there is evidence to show that some children are more susceptible to diphtheritic paralysis than others.

Severe paralysis of the constrictors of the pharynx is not common, and when it occurs it is usually associated with limb and trunk paralysis.

Paralysis of the limbs and trunk practically always go together. I have not seen any case where one has been unassociated with the other. The paralysis of the limbs is rarely complete, and is always accompanied by loss of the deep reflexes. There is always a general loss of muscular tone, and often decided wasting. The incidence of the wasting does not seem to fall on any particular muscle groups.

Paralysis of the muscles of the neck, of the intercostal muscles, and of the diaphragm are seen.

Complete paralysis of the diaphragm occurred in three of the cases now being discussed. This phenomenon appeared in the fourth week in each instance. One of the children died, and two recovered.

Visceral Paralysis.—Sometimes in the course of post-diphtheritic disability an uncontrollable diarrhoea supervenes, and it seems feasible to attribute this to a paralysis of the splanchnic nerves going to the intestines.

Reference has already been made to a case of partial anuria that was probably due to vasomotor paralysis of the renal vessels.

Again, it is said that paralysis of the vagus sometimes occurs, resulting in heart failure, preceded by a very rapid pulse. I have not seen this.

The character of the cough in diphtheritic paralysis is worth considering. In conditions where there is paralysis of the trunk, or even where there is marked general asthenia without definite paralysis, the cough, whether voluntary or reflex, is very characteristic. On the expiratory effort of coughing the mucous rattles along the trachea, but is not expelled. Insufficient closure of the glottis, due to paresis of the laryngeal muscles, and a weak expiratory effort, due to paresis of the respiratory muscles, are the factors that bring about this peculiarity in the cough. I consider that this cough is as characteristic of this part of the disease as croup is of laryngeal involvement in the early stages.

N.B.—Sensory disturbances have been purposely omitted from consideration because their estimation in young children is not satisfactory.

Of the paralytic disturbances of diphtheria alterations in the knee-jerks form a not un-

important part. A careful examination of the knee-jerks has been made in about 150 cases. Two phenomena have been observed.

A loss of the K.J.'s and an exaggeration of the K.J.'s:—I find it possible to divide the loss of K.J. in diphtheria into two *clinical* varieties—an early loss of K.J. not preceded by exaggeration, and a late loss of K.J. often, at least, preceded by an exaggeration.

By the early loss of K.J. is meant a loss within about the first two weeks of the disease. It eventuates only after severe primary symptoms, and must be looked upon as a danger signal. When it occurs a prolonged convalescence can be predicted, and severe paralysis must be expected. This early loss of K.J. lasts from a few weeks to a few months.

The late loss of K.J., referred to above, occurs after six weeks from the beginning of the disease. It is usually preceded by an exaggeration that lasts some weeks, and is not of serious import. It is unassociated with severe paralysis, but there may have been a transient paralysis of the palate or pharynx. It may last many weeks, and is then the only sign of a preceding diphtheria. Whether this late less important form of loss of K.J. is always preceded by exaggeration I cannot say, but as a rule it seems to be.

A late loss of K.J. may occur in association with severe paralytic symptoms, but I have not seen this preceded by exaggeration.

Minor differences of the K.J.'s on the two sides are often seen.

A post-diphtheritic exaggeration of the K.J.'s exists. It occurs after cases of medium severity, and appears about the second or third week. It may last several weeks. Whether it always gives way to ultimate loss I am not prepared to say, but in all the cases that could be watched long enough it did do so.

Addenda.—I should like to make a little addition to what I said about post-diphtheritic cardiac slowing in a former part of this paper. Mention was made of the fact that marked irregularity, as a rule, accompanied the post-diphtheritic slowing of the pulse. I wish now to say that irregularity is never absent from, and is in fact an essential part of, this form of pulse. And I should again like to emphasise the facts that this slow and irregular pulse only appears after some days, usually about the tenth day, and that it is quite distinct from the early pulse due to more or less toxæmia.

In conclusion, I have to thank Dr. Clubbe for permission to use his cases in preparing this paper, and for friendly criticisms before publication.

PROGRESS IN GYNÆCOLOGY.

BY W. J. STEWART MCKAY, M.B., M.CH.,
B.SC., HON. SURGEON TO THE LEWISHAM
HOSPITAL FOR WOMEN AND CHILDREN,
AND TO THE BENEVOLENT ASYLUM, SYDNEY.

I WISH to-night to read some remarks on the progress that has been made in minor gynæcology. I intend to contrast the methods and therapeutic agents of the ancients with those of the present day, and by this means to show, that much of what is put down as modern progress is merely the revival of the practice of nearly 2,000 years ago. Consequently, the absolute advance made in minor gynæcology is quite insignificant in comparison with the vast strides that have taken place in major gynæcology. In the second part of this paper I propose to consider some of the operations of the present day, and to ask the question whether these operations are really tending to advance or to retard the progress of this branch of surgery. I shall first give a rapid glance at the sources from which one may draw one's ideas as to what the ancients knew of the diseases of women.

The Scriptures contain many passages on the subject, but the oldest work on medicine at present known to us is the "Eber's Papyrus," the German translation of which I exhibit to-night. The work may be one of the 42 Hermetic Books that existed in Egypt; or, on the other hand, it may be merely a compilation. Its date is 1500 B.C., and it contains several pages on the diseases of women. Among the Hermetic Books, however, it is to be noted that there was a separate work on gynæcology, which has unfortunately not come down to us; but we have good authority for the statement that specialities flourished in Egypt, and that gynæcology was one of them. Next in order of time come the Books of Hindu Medicine—the "Charaka" and "Susruta Vedas." These works have been brought prominently forward by one of our profession, Dr. Wise. Their date is uncertain, but may reach back to the tenth century B.C.

They contain chapters on gynæcology, and many of the passages show considerable insight into this branch of medicine. We then come to Græcian medicine and to Hippocrates (400 B.C.). Among the works of this truly great man there is little of interest on our subject; but in the works bearing his name, but now considered to have been written by others, there is a very complete treatise in Greek on gynæcology. Littré is of opinion that this work emanated from the Alexandrian school, whither the seat of medicine went after the fall of the Græcian Empire. I shall draw largely on this work to-night in my

remarks. We now turn to the West, and find that with the rise of the Roman Empire we have vice and immorality flourishing at the beginning of the Christian Era, and, accordingly, we have a great demand for gynæcologists; while the abortionist plied his calling, using the most ingenious devices. Soranus and Moschion now wrote their works. The former has left us a most excellent treatise: the latter an interesting *vade-mecum* for midwives. Still later we have the work of Ætius, probably compiled in the Alexandrian Library about 500 A.D., before its destruction by the Omar. This work, in my opinion, is the best treatise on gynæcology written previous to the nineteenth century. It contains some capital chapters by one Archigenes, of the first century. Still later we have the works of Paul of Ægineta, so ably edited by Dr. Adams; and after this we have the numerous passages scattered through the writings of the Arabian physicians—Rhazes, Haly Abbas, Avicenna, and others. Besides these writers, there are many observations in the works of well-known authors, such as Aristotle, Pliny, Celsus, and Galen. I have compiled a very long list of authors on gynæcology (among the number being some celebrated midwives), whose works are quite lost to us; and it appears to me, that gynæcology, which has so long flourished as a speciality, has had a vast literature, which has either perished or yet remains to be unearthed. But not only have we accurate descriptions of the diseases of women, but we have also some excellent accounts of pelvic anatomy. To illustrate this, I might allude to the minute description given by Soranus of the anatomy of the uterus, though, strange to say, he does not mention the fallopian tubes; nor does Moschion, who wrote soon after him. In a copy of the latter's work, which I exhibit to-night, there is to be seen the oldest representation of the uterus, and it will be noted that the tubes are omitted from the drawing, which probably is by Vesalius, and not by Moschion. But though Fallopius has been given the credit of discovering, and of first describing the tubes called after him (and even quite lately Barbour, of Edinburgh, denies that the ancients knew of the tubes), I am glad to say that Ætius has forestalled Fallopius, as is very apparent from the following passage. He says that, from either side of the fundus of the uterus, flexible tubes are carried to the ovaries, which are situated on either side of the uterus, and that during the act of congress the uterus draws the semen through these winding tubes from the ovaries. We see that not only were the tubes known, but the modern theory of the fibrated end of the tube

clasping the ovary is anticipated. I will now endeavour to give some idea of the modes of treatment and therapeutic agents employed by the ancients in their gynaecological practice.

Methods of Examinations.—The ancients practised abdominal palpation, percussion, and succussion, as is well shown from the account given by Soranus of the differential diagnosis between pregnancy, ascites, and tumors. The bimanual must have been used, else they could not have given us the excellent and accurate accounts of all the displacements of the uterus that have been handed down to us. Vaginal examinations were made by physicians and midwives, and even the patient herself was taught to examine her own os. Rectal examination was in use, and *Ætius*, in speaking of retroversion, says that the midwife should be first directed to lift up the uterus by introducing the finger into the rectum.

The position chosen at a vaginal examination is well illustrated by the following passage from *Ætius*, who is quoting Archigenes; and it further shows the use of the speculum and sound. The writer is treating of pelvic abscess, and directs that the patient be placed supine on a chair, legs drawn up on the abdomen, thighs separated, and her arms brought down under her legs and secured by a cord passing over her neck. Then the surgeon separates the labia with a speculum, and makes an examination, having, however, first measured the length of the vagina with the sound, so that he may not compress the uterus with a too-long speculum, and so cause unnecessary pain. After the speculum is inserted a screw is twisted by an assistant, and the blades dilate the vagina. Beside the above position, the knee-elbow one was occasionally used in connection with retroflexions; and *Ætius* speaks of it also in the administration of enemata. A position somewhat resembling Trendelenburg's was used in cases of complete prolapse of the uterus; the patient's legs being tied to a frame work, and thus she was kept for hours.

Instruments.—Speculum: This was used for both rectal and vaginal examinations. It fell into disuse for ages, was revived by Ambroise Paré, and again forgotten until this century, when it was brought to light by Récamier. One reason for its disuse was the fact that the Mahomedan creed forbade the examination of the female genitals by male physicians. Vaginal retractors were also in use.

Uterine Dilators.—These consisted of wooden or metal rods, the latter composed of copper, tin, and lead. The wooden rods were made in sets, and resembled what are now called Hegar's

dilators. They were made of pine wood, six in a set, the largest being the size of the index finger. They were conical at the distal end, and became somewhat larger towards the handle. They were oiled before introduction, and were used one after the other for rapid dilatation. The dilatation thus brought about was sometimes kept up by a kind of intra-uterine stem-pessary, made of lead, and this was allowed to remain in the uterus if certain displacements were being treated. The tents of slippery elm are described as being in sets of three, and were used for slow dilatation. The elm tent is used in America at the present day, and slow dilatation by means of successive rods is the method used by Tait before curetting. Digital dilatation was sometimes resorted to.

A vaginal dilator, similar to Sim's, was used after an operation for artificial vagina, an operation which differs very slightly from that now known as Amussat's.

Sponge tents were also used in dilating the uterus. It is generally supposed that Sir James Simpson was the inventor of sponge tents, and that he got his original idea from a polypus that slowly dilated the os. Simpson, as is well-known, was a most learned archaeologist, and if he missed the following passage in *Ætius* it is strange:—*Ætius* is quoting Archigenes, and says that, in treating obstruction at the mouth of the womb, that we should introduce a sponge tent for its dilatation, and that a thread should be attached to the tent, so we may easily remove it, and that after its removal we should introduce a larger one.

Sound.—We are accustomed to associate the name of Simpson with the uterine sound, for it is urged that, though the ancients used the sound, they did so only to measure the vagina, or dilate the uterus. This is an error. Numerous passages in the works above-mentioned clearly show that the sound was used to measure the uterus and vagina, and to determine the position of the uterus, and the patency of its os—in fact, it was a real diagnostic measure. It was also used to rectify malpositions, and *Ætius* gives a passage bearing on this in speaking about retroflexione. They also used rods for applying astringents and medicinal substances to the os and the interior of the womb, in a similar way that we now use Playfair's probes.

Double-channelled catheters were used for washing out the uterus, the reservoir for holding the fluid and for acting as a syringe being constructed out of a bullock's bladder. Vaginal irrigation was practised, and the bladder was likewise washed out; the catheters being made of copper, silver, and lead, and were always oiled before introduction.

The glycerine plug, so much used in modern practices, was represented by plugs of wool, soaked in warm astringents and oils, and were used in disease of the cervix and in pelvic peritonitis and cellulitis.

Suppositories.—Frequent mention is made of pessaries in ancient writings, but the term was applied to rolls of fibre, shaped like a tent, and soaked in medicinal substances, so that they could be applied to the endometrium, the os, or the vagina. It will be remembered that Sir James Simpson reviewed the use of large suppositories for treating vaginal affections, while the iodoform bougie is not infrequently used in uterine complaints.

Pessaries.—The instrument known to us as the pessary was foreshadowed by the ancients. The first reference to this is given in the Alexandrian work referred to above. The writer says that, after successful reduction of a complete prolapse, we should take a pomegranate and halve it, and place one of the parts in wine, and then place it in the vagina, as far up as possible, and then prevent it from slipping out by using a T bandage. I might mention that prolapse of the uterus is one of the diseases specially mentioned in the Ebers papyrus, and it is in connection with complete prolapse that we have the first mention of vaginal hysterectomy by Soranus.

Another therapeutic measure in great demand was fumigation. Before an operation the patient was first purged, the part to be operated on was then washed, and after this thoroughly fumigated. It may be asked if the ancients used antiseptics. Hippocrates, I find, used for ulcers and wounds "raw tar water," which we may truly regard as a near relation to carbolic acid.

I will not detain you with a list of their instruments. Suffice it to say that they had triangular-bladed needles, straight and curved; they used catgut, silver and gold wire; and even the drainage-tube was used after certain abdominal operations.

I have now given a glance at some of the means adopted by the ancients in treating the diseases peculiar to women, and have incidentally mentioned some of these diseases. I have no space for a list of these diseases; it is a long one, and most of the complaints coming under the heading of minor gynaecology were known to them, and treated. The great gulf that separates ancient from modern medicine is the fact that the pathology of the ancients was generally based on imagination and ingenuity.

I propose now to examine certain operations which are being continually performed, and to ask the questions—Are these operations really an

advance? Were the ancients at a great disadvantage from not having practised them? And, lastly, should we continue to practise them? I have selected operations coming under the heading of minor gynaecology only for two reasons. Firstly, because major gynaecology was practically unknown to the ancients; and, secondly, because I have already had the honour of reading before you a paper, in which I have mentioned some of the lines, that I think we might follow in our future progress in major operations.

I am glad to say that since I read that paper I have strictly followed these lines, and have had the satisfaction of performing 23 abdominal sections with only one death. These results, for a first series of 23 mixed abdominal sections, are the best yet recorded; and I might further mention that these 20 odd sections form part of a series of 70 sections done by my colleagues and myself during the last 12 months at the Lewisham Hospital for Women, and that in this series there have only been four deaths. I believe these are the best hospital results yet obtained in Australia.

The operations that I have selected for consideration are Emmet's, Alexander's, and Curetting.

Emmet's Operation.—It is almost impossible, at present, to say what will be the future of Emmet's operation. Operators differ widely as to its utility. Thus, one well-known author says, "Nothing more useless than Emmet's operation has ever been introduced into surgical practice;" while, on the other hand, we have the contention that in cases of subinvolution, with laceration of the cervix, Emmet's operation alone can effect a radical and permanent cure. That the importance of laceration of the cervix has been absurdly overrated by Emmet and his followers is now generally admitted; and we cannot but regard Emmet's opinion "that the half of all uterine affections in women who have had children depend upon laceration of the cervix," as anything but a gross exaggeration. Like many other surgical procedures, once they leave the hands of the authors, essential details are neglected, and the operations are abused. Emmet, speaking of his own operation, says, "The great point is to check the abuse, which is fearful. Everyone feels competent to perform it; it is done without the proper preliminary treatment, and with no special purpose. I believe in nine cases out of ten, when it is done, or attempted, the execution of the operation is defective, and without any benefit to the patient." For my own part, I believe that lacerations of the cervix in themselves cause no symptoms, but that certain secondary effects may

follow from a laceration which are capable of giving rise to symptoms which may require careful treatment. I cannot, however, admit that the mending of a laceration will bring about the wonderful change as stated by Emmet and his followers. We may, however, well believe that the excellent preliminary treatment, as laid down by Emmet, extending, as it does in some cases, for four months, is the real secret of many of the successful results so often obtained, and that the repair of the laceration is not the important part of the treatment. In doing a curetting, I see no objection to the practice of paring the edges of a laceration; fully, however, recognising that this is not Emmet's operation. I think the practice is justifiable on the maxim that, if we can restore a breach of continuity without ill effects to the surrounding parts, that we should do so; for it may yet be proved, as has been suggested, that carcinoma is more likely to develop in a lacerated cervix than in a sound one. From the above considerations, we cannot claim Emmet's operation, as performed in the great majority of cases, as an advance in gynecology, for have we not the assurance of the author himself that 90 per cent. of the cases operated on are failures? I might, I think, claim for the ancients, with their fumigations, hot douches, and topical applications, at least 10 per cent. of recoveries.

Alexander's Operation.—I am rather loath to speak of this operation, because on several occasions when I have done so, my views have been received with disfavour. I will, however, state a few facts that have come under my notice. Firstly, though I have been to many gynecological clinics, I have never seen Alexander's operation performed in any place but Sydney. Secondly, I have never heard the operation praised by any authority on gynecology that I have happened to meet; and, lastly, that the medical literature of Europe, though not of America, year by year shows that this operation is steadily growing into disfavour. I am fully aware that we have in our midst one surgeon whose operative skill is undoubted, and who has performed this operation probably more times than anyone living. It may reasonably be asked why has this surgeon, with his unique experience, never tabulated his results? We have reached a stage in surgery where the mere statement that an operation has been performed so many times is not sufficient to satisfy us as to its success. What we want are tabulated results. If the cases cannot be traced they cannot be claimed as successes; if they can be traced, the results can be easily ascertained; and an operation, which at present appears to be no real advance in gynecology, may yet be shown to be really a great

acquisition. I believe that hysteropexy will displace Alexander's operation in the near future. Twice I have had occasion to perform it; it is simple, efficient, and satisfactory.

Curetting.—We may have had doubts as to the future of the two preceding operations; we can have no difficulty in dealing with curetting. Much as I would like to credit the ancients with it, I can find nothing that would justify the opinion that they performed this most useful operation. So much do I think of this operation that I have no hesitation in saying, that it is the greatest addition that minor gynecology has ever had, or is ever likely to have. It has indeed been the life-buoy of minor gynecology for many a year. When the pessary and the suppository have failed the general practitioner, the curette has often helped him out of his difficulty. I allude specially to the general practitioner, for this is the operation that he regards as being his legitimate property. He may feel rather nervous at tackling a tracheotomy or a tonsilotomy, but at a curetting he is quite at home. It is this familiarity with the operation, its comparative simplicity, its almost unheard-of mortality, that makes it such a favourite. But, unfortunately, there is another side to this picture; and this side is the one that I wish to specially dwell upon now. It has dawned upon me after taking in writing several thousand histories of gynecological cases.

I appeal to the specialists here to-night if they have not, time after time, come across cases where a curetting has been performed for menorrhagia due to tubal disease, and where after the curetting a mild salpingitis has been converted into acute tubal trouble. So frequently did I observe this in the out-patient room at the Soho Hospital, London, that I have come to the conclusion that, next to gonorrhœa, the most potent factor in the etiology of tubal disease is the curette of the general practitioner. Let us pause for one moment to enquire into this point. When a case of actual tubal disease comes to a general practitioner he adopts one of three courses. He treats the case because he understands it; he treats case not understanding it, but because it is a case; or he sends the case immediately to a specialist. There are few who adopt the latter course, consequently the case is either treated well or badly, and, should menorrhagia be a prominent symptom, the patient is most inevitably curetted sooner or later. In our future advance in gynecology, can he look forward to a better state of things? I do not think so; for, as we cannot ask every practitioner to be up in every speciality, we cannot hope that gynecology will be more favoured than other specialities. At present, then, while we all admit that curetting is a great

acquisition to surgery, the indiscriminate practice of this operation by the general practitioner is tending to create a most grave evil, since mild tubal cases are rapidly being converted into grave tubal mischief. This re-acts on the specialist, for, by the time he receives the case, the prognosis has become much more unfavourable. If this is a real evil that I have painted, is there a remedy? I think there is. In future, no practitioner should attempt to perform a curetting unless he is competent to distinguish between a normal and a diseased tube. This, for the present, is akin to saying that 75 per cent. of general practitioners should cease to do curettage, except in emergency cases, as after abortion, for here the indication is evident, and the skill required a minimum.

It may be urged against me that this language is exaggerated, and that the knowledge possessed by the general practitioner is quite sufficient to prevent him making these grave errors in diagnosis and treatment.

With your permission I will take, almost at random, a few cases that have come under my notice of late, to illustrate errors in diagnosis. The first case was sent to the Lewisham Hospital, suffering from peritonitis, supposed to be due to grave tubal trouble. The woman died twelve hours after admission from rupture of her stomach, due to carcinoma. At the *P.M.* the tubes were found healthy.

The second case was sent to me from the country, suffering from menorrhagia. She had been curetted several times in two years, and she was sent with the belief that she either had tubal disease or carcinoma. She had neither. She had two hydatid cysts of the liver, and on these being removed the hæmorrhage immediately ceased.

The third case was sent to me for cellulitis, following on curetting for menorrhagia. This woman had a very large pyosalpinx on either side, one of the tubes and ovary containing 18 ounces of pus.

The fourth case had been treated for years for fibroid of the uterus. It also was a case of double pyosalpinx; yet the unfortunate woman had been curetted time after time for the menorrhagia.

The last case that I shall mention was the one from which I removed the specimen of ectopic gestation that I exhibited to-night. This case was sent to the hospital as a case of cellulitis.

I had drawn up these cases for the last meeting of the Association, but since then two other cases have come up, which presented the matter of curetting in a different light. In fact, they serve to illustrate the point, that, by not performing a curetting in some cases the medical man

may commit even a greater mistake than by performing it in unsuitable cases.

The first of these cases was seen by me after she had been flooding for 48 hours. The patient was quite exhausted from the loss of blood, which was due to a miscarriage; the practitioner in charge of the case having put off the curetting from hour till hour until the woman's life was in danger. On being curetted, the hæmorrhage immediately ceased.

The second case was one in which the woman had aborted, but was not seen by a medical man for some days afterwards. Though he diagnosed the case correctly, he put off the operating from day to day, so that when I saw the case the woman was in a well-advanced state of septiciæmia. I curetted her, but she died twelve days later of septiciæmia.

A timely curetting in either of these cases would no doubt have stopped all further trouble; but its delay in one case reduced the woman to a weak, anæmic condition, and cost the other patient her life.

I have now brought my paper to an end. I have endeavoured to show, that the ancients knew more about gynæcological methods than text books are inclined to give them credit for; and I have also tried to point out that we may be doing, from day to day, operations that we fondly imagine show a great advance on bygone times; never, however, pausing to think that these operations may in themselves be worse than useless, for by performing them badly, or in unsuitable cases, we are creating greater evils than we seek to remedy.

My views on these operations may be wrong; if so, I shall be glad now to have my errors pointed out by older and more experienced men.

NOTES OF A CASE OF ACUTE INTUSSUSCEPTION.

By J. A. WHEELER, M.B., B.S. LOND.,
M.R.C.S. ENG., OF TOOWONG (BRISBANE).

A BOY, *æt.* seven, got up one morning quite well, and, after a good breakfast, went to the closet. After he had been there a few minutes his mother heard him screaming, and, on going to see what was the matter, found him rolling on the floor, and complaining of severe pain in the abdomen. On seeing him half-an-hour afterwards, I found him collapsed, and with a quick pulse. The abdominal walls were soft, and in the right side was a longish, oval lump, very tender on pressure, and extending from the level of the iliac crest to within an inch and a-half of the ribs. The rectum was empty, and there was

no mucus coming from the anus. The abdominal pain came on in paroxysms, accompanied with rectal tenesmus, which was so severe as to cause a slight prolapse of the anus. I immediately proceeded to inject warm water into the bowel, and, after using about three pints, the boy suddenly said the pain had all gone, and almost immediately went to sleep. The lump in the right side had entirely disappeared, and in about a quarter of an hour he returned the injection, which contained a few grape seeds and skins, which, however, did not appear to be in sufficient quantity to cause obstruction. After returning the injection, he wanted to get up and go out to play, saying there was nothing the matter with him now. He was, however, kept in bed for the rest of the morning, and allowed to get up after dinner, at which he made a good meal, and seemed none the worse for his morning's experience.

EXTRACTS FROM CURRENT FOREIGN MEDICAL LITERATURE.

BY C. A. ALTMANN, M.B., F.R.C.S., ED., OF PORT LINCOLN, SOUTH AUSTRALIA.

Organotherapeutics in Prostatic Hypertrophy (Reinert Verhandl. des xlii. Congr. f. Inn. Medicin, April, 1895). The author administered raw prostatic glands obtained from animals to patients suffering from prostatic enlargement. The results were in some of them favourable. There was considerable diminution in the size of the gland, as well as improvement of the subjective troubles and of the general condition. No unfavourable effects were noticed. The author recommends further trial.

The Treatment of Prostatic Hypertrophy by Section and Ligation of the Spermatic Cord (L. Isnard, Centrbl. f. Chir., July 13th, 1895).—On May 1st, 1895, the author operated on a patient *æt.* 72, who had suffered from prostatic hypertrophy for about twelve months. The operation consisted in dividing the spermatic cord and ligaturing both ends. On the 14th June he was able to exhibit the patient as completely cured. Incontinence and retention had ceased, and the patient was able during the night to retain the urine for seven hours. The urine, which formerly had been purulent and occasionally mixed with blood, was now clear and normal. The prostate, which before the operation was of the size of a walnut, could now hardly be felt through the rectum. The testicle had diminished to half its former size.

Castration for Prostatic Hypertrophy (Gerrat, Chir. Annalen, 1895, p. 97).—The author, a Russian, relates two cases in which castration was followed by beneficial results, although in one of them, an old man of 72, and the subject of emphysema, marked atheromatous degeneration of the arteries, double hydrocele, and an inguinal hernia, the result was not as satisfactory as in the second patient, who was 60 years of age, and otherwise healthy. The author considers double castration indicated in all cases of prostatic hypertrophy, without regard to severity or complications, where the *potentia virilis* has become extinct; but, when this is not the case, all other means must be tried first before opera-

tion is resorted to. In speaking of the origin of the operation, he refers to observations of his made *P.M.* on Skopziats (a sect apparently more common in certain parts of Russia than elsewhere), whose prostatic glands were always found to be atrophied. (Centrbl. f. Chir., 1895, No. 16).

Potts' Disease; Paraplegia, Caused by the Pressure of a Fibrous "Plaque," Laminectomy; Recovery (L. Bérard, Province Méd., 1894, No. 50).—Patient, a girl *æt.* 7, had been ill for two years, and had a "boss" in the mid-dorsal region. Five months ago symptoms of partial paraplegia appeared, and during the last three months the paraplegia was almost total. Sensibility was slightly diminished; no pain. Patellar reflex exaggerated. No signs of abscess nor of tuberculosis elsewhere. Three (3) spinal arches were opened, and there was considerable bulging of the dura mater. On gently pushing aside the spinal cord, a fibrous, granulating, firm "plaque" 3cm. long and 8-10mm. thick was seen on the left anterior part of the dura mater. The plaque was easily separated from the meninges, and was seen to be covering an abscess cavity in a necrotic vertebra. No sequestrum. The pus was drained, and the wound plugged. On the next day voluntary motion of the legs was almost free, and on the following day became quite so. The increased reflex excitability began to diminish. After two and a-half months the child was completely restored; there were no pains, nor nervous symptoms of any kind, with the exception of slightly exaggerated reflexes. The wound healed without a fistula.

The Effects of Partial Extirpation of the Pancreas in Dogs (W. Sandmeyer, Zeitschr. f. Biologie N.F., Bd. xiii).—After carefully conducted experiments, the author arrives at the following conclusions:—On extirpating the pancreas to one-ninth or one-fifth of its bulk, and so that the remaining portion is no longer connected with the intestine, there appears after some time at first slight and afterwards well-marked diabetes mellitus, which continues until death occurs. Albuminous bodies are utilised to the extent of 70 per cent. The not-emulsified fats are absorbed in varying quantities, the emulsified ones up to 42 per cent. The addition of raw pancreas to the food favours the utilisation of the albuminous bodies as well as that of the fats. With a uniform meat diet and the simultaneous administration of raw pancreas of cattle, the secretion of sugar increases to from three to fourteen fold. The exhibition of carbohydrates in the form of starch, maltose, grape sugar, sugar of milk, cane sugar, and levulose increases the amount of sugar secreted; but raffinose and inulin, which are absorbed only to a slight degree, have a less marked influence. Glycerine and gum arabic seem to have very little effect. It was only occasionally that the author could demonstrate the presence of acetone, acetic acid, and oxybutyric acid in the urine of the diabetic animals. Strange to say, the N balance remained level in spite of the decreasing weight of the animal. The relative proportion of the excreted sugar and nitrogen was generally as 2 to 1. The fatty degeneration (*Verfettung*) of the liver, kidneys, and striped muscular fibre, known to occur after complete extirpation of the pancreas, was not observed in these cases of partial extirpation, and the author is therefore inclined to attribute it to effects of suppuration. A very remarkable observation of the authors was that dogs which, after partial extirpation, did not yet show signs of diabetes, became diabetic immediately after being fed with a sufficient quantity of horseflesh to which raw pancreas had been added.

The Local Treatment of Carbuncle (F. Fischer, Centralbl. f. Chir., 1895, No. 17).—The author recommends a new method of treating carbuncles. He advises the division of the carbuncle into squares by vertical and horizontal incisions. The incisions are made at the distance of an inch from one another, and penetrate well into the sub-cutaneous tissue, the peripheral ones being made in healthy substance. The squares thus formed do not become gangrenous, but very soon are seen to be less inflamed and to shrink, whilst pus and sloughs are discharging through the gaping incisions. After all necrotic tissue has been shed, the square pieces of skin remain adherent to the fascia by means of a piece of connecting substance of the size of a lead pencil, in which new blood vessels are developed, and if the parts are well cleansed they are easily made to unite with the granulating surface beneath. When healing is complete, the scar resembles a piece of skin transplanted according to Thiersch's method.

Prolapse of the Rectum, Caused by a Stone in the Bladder (Idzinski, Przeglad Lekarski, 1895, No. 5).—A boy, *et. five*, otherwise healthy, had suffered during the last 12 months from prolapse of the rectum, the prolapsed piece measuring about 40cm. He had also a constant desire to pass water and motions. The prolapsed bowel was easily reduced, but returned immediately on withdrawing the support. Examination with the catheter gave a negative result, but bi-manual examination through the rectum revealed the presence of a stone of the size of a walnut, situated high up in the bladder on the right side. The stone was extracted by the suprapubic method, and a complete cure of the prolapse was the result. (Centralbl. f. Chirurgie, No. 16, 1895).

PROCEEDINGS OF BRANCHES.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

A GENERAL meeting of the Branch was held in the Royal Society's Room, Brisbane, on Thursday, 15th August, 1895. Present—Dr. Jackson (President), in the chair, Drs. Lyons, Taylor, Hirschfeld, Macnamara, Freshney, Orr, Comyn, Brockway, E. H. O'Doherty, and Connolly (hon. secretary).

The minutes of the previous meeting were read and confirmed.

Drs. Macnamara and Orr were elected auditors for the current year.

Dr. CONNOLLY nominated Dr. A. H. Murray for membership.

Dr. LYONS said: Mr. Chairman and Gentlemen,—The motion that stands in my name on this evening's business paper is one that speaks for itself, and scarcely requires any comment from me. However, in order to place you all in possession of the facts, and to clear the way, as it were, for the speakers who are likely to follow me, I shall briefly give a summary of the case. Last October, a supposed leper, Molloy, was sent to Brisbane from Bockhampton for the purpose of being examined as to his condition. He had already been examined by two doctors, who had certified to his being a leper. He was isolated in a tent in the grounds of the Hospital, and Drs. Wray, K. I. O'Doherty, Hirschfeld, and myself were directed by the Government to examine

him. He was subjected to a most careful clinical examination, and in addition a bacteriological examination was made by Dr. Hirschfeld, who demonstrated the existence of the bacilli characteristic of the disease. Through the courtesy of Dr. Hirschfeld, I was present at the investigation, watched the whole process, and unmistakably saw the bacilli. The serum containing the bacilli was expressed from a tubercle on the thigh. The result of this combined examination was that we reported it as a case of incipient leprosy, and the man was sent to the lazaret at Dunwich. We heard no more of this case until the 19th July, when a meeting of the Board of Health was reported in the *Brisbane Courier*. From that report we learned, much to our surprise, that on the mere statement of a layman, unsupported by any medical evidence, the leper Molloy was removed from the lazaret to Peel Island. It is very much to be deplored that we have no representatives in the House, for we should then have Acts of Parliament framed with a little more regard to the interests of the profession. A case in point is the Leprosy Act: Clause 8 runs thus: "If it be proved to the satisfaction of the Minister that a person detained in a lazaret, or a person ordered to be removed to a lazaret, is not suffering from leprosy, the Minister may, by order under his hand, direct him to be discharged from custody." Certainly in this case the man was not discharged from custody, but the first step was taken—he was released from the lazaret. And what was the evidence that satisfied the Minister? The unsupported statement of a mere layman. Now I ask, can the negative result of a bacteriological examination only be at all considered as satisfactory evidence? or, can it even be looked upon as weighty enough to upset the opinion of six medical men who, after careful clinical and bacteriological examination, certified to the case being one of genuine leprosy? In my opinion, this clause should be revised, and it should definitely and explicitly be stated as to what should be considered satisfactory evidence. And I very much fear that unless this is done the profession will be again subjected to the humiliation of having a clinical diagnosis subordinated to a mere bacteriological examination. And this, Mr. Chairman, brings me to the motion that I have to propose this evening,—“That in the interests of the profession a full and detailed account of the case of Molloy should be forwarded by this Branch to the editor of the *British Medical Journal*, and also to the editor of the *Australasian Medical Gazette*, for the purpose of obtaining an authoritative expression of opinion as to whether the subordination of a clinical diagnosis of leprosy to a purely bacteriological examination is conducive to the best interest of the patient and the profession, or calculated to raise it in the estimation of the public.”

Dr. HIRSCHFELD said: In supporting the motion, I wish to make remarks with regard to the bacteriological aspect of the question. The presence of the leprosy bacillus is a most valuable symptom of leprosy, and, like every other symptom, is part and parcel of the medical examination, and cannot be separated from it. The reasons are quite obvious. The leprosy bacillus is absent in the peripheral lesions of the great majority of cases of nervous leprosy. Cornil and Bacles mention that they could only find it in one out of three cases; it appears and disappears in macular leprosy (Ziegler); it even disappears occasionally in true leprous tubercles when they subside (Beavan Rake). Why it is present in one case, disappears in the second, and it is totally absent in the third case, only a medical man can decide, who, by his education and knowledge, is fully acquainted with the physiological, the pathological, and the clinical symptoms, the action of drugs, constitution

climate, and other circumstances upon the disease, instead of its being left to a layman, however great his mechanical skill in making and staining microscopical specimens may be. Bacteriology, as far as it relates to disease, belongs to medicine as much as the examination of the disturbances of the throat, the eyes, or any other symptoms. We all know how important a symptom the temperature is in typhoid fever. What would we, what would anybody else, say if the nurse who is entrusted with the duty of taking and recording the temperature should take it upon herself, or should be relied upon as an authority, to overthrow the diagnosis of the medical man in charge of the case, simply because the temperature does not follow the ordinary course of typhoid. The position of the nurse is exactly similar to the position of the layman who, on account of his mechanical skill, may be called upon to do a certain mechanical part of the examination. There is yet another side to the question. Some time ago I had occasion to examine, in conjunction with two other medical men, a case of suspected leprosy, which had been previously examined by a gentleman who is not a medical man. It was a boy six or seven years old, and 30 coverglass specimens had been taken from his little face, with the result that a considerable disfigurement and infiltration of the face was left, which, I trust, will have been only temporary. Now, to take coverglass specimens, it is necessary to pinch the skin deeply and strongly with a forceps, so that the blood may be squeezed out of it. Such an examination is, to say the least, undesirable for anyone not suffering from leprosy; particularly in the face, where permanent marks may be left. As regards lepers, they may form the starting point of ulcers, which in such patients as a rule have no tendency to heal. This may be a matter of indifference to a layman who is sent out with the sole order and object of taking coverglass specimens, and who is not acquainted with the physiological and pathological effects of his operation. But it is of paramount importance to the patient and the physician who is entrusted with the responsibility of making his diagnosis without injuring his patient. These, Mr. Chairman, are my reasons for seconding Dr. Lyons' motion, and expressing the opinion that the bacteriological examination of suspected lepers should be carried out by, or under the immediate supervision of, a qualified medical practitioner.

Dr. BROCKWAY objected to the last clause of the motion—"or calculated to raise the latter in the estimation of the public"—as somewhat undignified. He thought that the negative result of the examination of Molloy made by the Government Bacteriologist of no value whatever, considering that there had been two previous positive results. Further, he thought that the position of the Government Analytical Chemist and that of the Government Bacteriologist had the same relation to the medical profession. On the former a medical man relied for the diagnosis of a case of poisoning, after the stomach contents had been examined, and on the latter for diagnosis after a bacteriological examination. Each was the recognised Government representative. For this reason he saw no cause for objecting to the office of Government Bacteriologist being filled by a layman.

Dr. CONNOLLY endorsed the remarks of Dr. Brockway.

Dr. COMYN said: There seems to be so much reason for discussion about this matter that I think it would be well to postpone it for another meeting. Eleven years ago I had a case up country, a Chinese leper. I had a telegram from the then Colonial Secretary, who

stated that he was informed it was not infectious or contagious. At that time I wanted the question raised, but I was advised that my report would only be pigeon-holed, and nothing was done. He may be there yet.

Dr. JACKSON said: Gentlemen,—It appears to me there is a little misapprehension in the minds of some of the speakers. It is not necessary for us to discuss whether the disease is contagious or not. We have been saved that trouble when the law made it necessary to confine every man who is a leper. Perhaps, for the benefit of the last speaker and those who came in late, I might shortly recapitulate the history of Molloy. Molloy was examined by two medical men in Bockhampton, one of whom found bacilli. He was sent down here, and was examined by four gentlemen (Drs. Wray, Lyons, K. I. O'Doherty, and Hirschfeld), who pronounced him to be a case of leprosy. Bacilli were found on that occasion also. Subsequently some improvement in the patient's condition led the Colonial Secretary to get Mr. Pound to examine him, and the results were negative. The Colonial Secretary then, quite within the law, transferred him from one lazaret to another. That is practically what occurred. He was transferred to another lazaret at Peel Island, though Peel Island was not declared a lazaret. At any rate he was not released. Subsequently an examination was made by Dr. Byrne, who pronounced the case one of leprosy, and the man is still in confinement. Well, I think there can be no objection to Mr. Pound making a bacteriological examination, so long as he confines himself to stating whether he found bacilli or not. This, however, Mr. Pound did not do. His report to the Central Board of Health went further. I admit that Mr. Pound is a capable bacteriologist, so far as the preparation and examination of slides go; but there is a point in which Mr. Pound is likely to fail. I doubt if he has sufficient clinical knowledge of the diseases confounded with leprosy to know whence to select the serum for the slides. If he does not select it from a portion of the body affected with leprosy, then he will not find bacilli. In any case, the best negative results are to my mind of no more value in a case of leprosy than in a case of tubercle, where one could not conclude that a patient was not tuberculous because no bacilli were found. I do not agree with Dr. Brockway that the examination, as made by Mr. Pound in this way, is parallel with the case of an analyst looking for arsenic in *post-mortem* specimens. If the analyst find arsenic in the secretions, then there can be but little doubt that the patient died of arsenic poisoning when the clinical symptoms agree; whereas, in the case of leprosy, I maintain it is not good and sufficient reason to say that the case is not one of leprosy because no bacilli are found. Plenty of authorities have been quoted to this effect. It seems to me that the great indiscretion that has been committed has been the amount of publicity that has been given to Mr. Pound's examination. If Mr. Pound's examination had not been made public till Dr. Byrne had proved the case leprosy, there would have been little to complain of. As to the effects of publicity, the news that any man has leprosy now goes all over Australia. It is sown broadcast, and the result is, supposing that at some future time a poor fellow may be recovered, and in such a state that the law may allow him to disappear or get out of the lazaret, nobody would have anything to do with him. The last state of that man will be worse than the first. Molloy himself would be anxious that he might be retained in the lazaret. Another thing in connection with this publicity is that the friends of the patients are

liable to be tabooed, so that they lose business, and they suffer sufficiently without being mulcted commercially. There is every reason why the information secured from these unfortunates should be as confidential as information got about any other of our patients. Nothing, perhaps, need be said of the fact that the Southern colonies must be wondering if anything else ever takes place in Queensland but the discovery of a fresh leper.

Dr. TAYLOR said that, having listened attentively to the discussion which had taken place concerning Molloy's case, it appeared to him that the point which had to be determined was whether the bacteriological examination of a suspected leper was part of a medical examination or not. It is clearly shown that a bacteriological examination alone cannot determine the diagnosis, as in certain cases of leprosy, and in some stages of the disease, the characteristic bacillus was not to be found. Therefore, while the discovery of the bacillus lepræ must be regarded as positive evidence of the disease, its non-discovery did not prove a person to be free from leprosy who presented the characteristic symptoms of the disease in any of its forms. Bacteriology, therefore, was valuable as affording positive evidence, but was of no value in proving a negation. We had, probably, in recent times, been too apt to rely on bacteriology as a means of diagnosis, not only in leprosy, but also in diphtheria, tubercular, and other affections which owe their existence to micro-organisms, to the exclusion in whole or in part of well-known symptoms, and the experience gained by years of study and observation of the course and termination of such diseases. But the true value of bacteriology as a means of diagnosis is becoming daily more clearly recognised, and its place more definitely fixed. He was of opinion that a bacteriological examination must be regarded as part of a medical examination, in the same sense that a chemical examination of the urine is so regarded, and, consequently, should be conducted by, or carried out under, the immediate supervision of a qualified medical practitioner. Because it may be deemed advisable to call in the assistance of an analytical chemist to examine the urine or the contents of the stomach, it does not follow that such examination should be regarded as something separate and distinct from the clinical examination of the case. As a matter of fact, it never is so regarded, but is justly considered as a part of such examination. So, also, when a bacteriological examination is deemed necessary, the fact of the technical portion of the work being confided to a person other than the medical practitioner charged with the diagnosis of the case does not constitute such examination a separate and distinct act from the medical examination, but, on the contrary, it forms a part of such medical examination. In accordance with this view of the subject, he would move the following amendment:—"That, whereas a bacteriological examination forms an important part of the medical examination of a suspected leper, it is necessary that such bacteriological examinations should be conducted by, or be carried out under the immediate supervision of, a qualified medical practitioner."

Dr. BROOKWAY seconded the amendment.

Dr. LYONS withdrew his motion, and Dr. Taylor's motion was carried unanimously.

Dr. TAYLOR proposed, and Dr. FRESHNEY seconded,—"That the proceedings of this meeting be forwarded to the parent association and the sister branches in Australasia, desiring them to express an opinion on the decision of the Queensland Branch."

Carried unanimously.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE usual meeting of the Branch was held at the Royal Society's Room, Sydney, on Friday, 27th September, 1895. Present—Drs. E. J. Jenkins (President), Sydney Jones, Quaife, Fiaschi, Worrall, Clubbe, Knaggs, Chisholm, Coutie, Thring, Tidswell, F. A. Bennet, O'Reilly, Jamieson, Macdonald Gill, Colpe, Lillie, Neill, Schrader, Spencer, Flynn, G. A. Marshall, Barkas, Wilkinson, J. A. Dick, Hankins, Hall, W. F. Quaife, Gordon Macleod, Megginson, Terry, Pope.

The minutes of the previous meeting were read and confirmed.

The PRESIDENT announced that Dr. S. J. Richards had been elected a member of the Branch.

Dr. F. A. BENNET exhibited a patient suffering from urticaria pigmentosa, and explained the case.

The patient was examined by the members.

NOTES ON A CASE OF URTICARIA PIGMENTOSA.

By F. A. BENNET, M.A., M.D., HON. PHYSICIAN TO SKIN DEPT., SYDNEY HOSPITAL.

I BRING before you to-night a child suffering from an affection which is sufficiently rare in its occurrence to justify, I hope, my exhibiting to you, and a complaint, moreover, which, when fully developed, presents sufficiently well-marked characters to claim for itself some interest from the profession.

This disease certainly cannot be a common one, since Dr. Allan Jamieson, of Edinburgh, has seen during the whole of his experience only two cases, whilst Dr. Crocker, of London, in the recent edition of his book on "Diseases of the Skin," mentions that only three have come under his care.

If you examine this child you will find that she presents a well-marked pigmented eruption over the body, back and front, particularly copious on the buttocks and the adjacent loins and thighs, not markedly symmetrical, nor grouped in any particular fashion. The hands and feet, as well as the mucous membrane of the mouth, are free. There appear to be no subjective symptoms, as the child exhibits no inclination to scratch. The lesions themselves consist of slightly-raised red patches and flattened dark-brown macules, circular or oval in shape.

The mother will tell you that these were observed first, when the child was a fortnight old, as red papules or wheals, which suddenly appeared on the gluteal regions, and which gradually flattened out as dark-brown macules, so that the various lesions here would be merely different stages of the same process. The eruption has spread by successive crops over the body until it is as you now see it. The child is subject to occasional attacks of ordinary

urticaria. Frequently the lesions brighten up, and evidence symptoms of fresh activity, which would be due to frequent congestions occurring on the same spots, and which would help partly to explain the persistence of the pigmentation.

The date of onset, then, which is always within the first six months of the child's existence, the mode of evolution, the general appearance and localization of the disease, give the complete history of an urticaria pigmentosa.

There would appear to be cases of this affection which differ from this one to some extent in the character and colour of the lesions, as well as in, it might be, the subjective symptoms, where nodules are more marked and pronounced, and where the colour, instead of being red or dark-brown, is yellow or buff-coloured, resembling much the nodular form of xanthoma, with which it is liable to be confounded. Itching, too, is often severe, as it might be in any form of urticaria pigmentosa, and the scratching which would naturally follow often sets up secondary symptoms, e.g., echthymatous pustules, vesicles, or bullæ, one or all, which would complicate the complaint and obscure the diagnosis.

There would appear to be three well-marked stages in the life history of this disease: the first, or eruptive stage, lasting for a year or longer, during which the eruption appears in successive crops, and travels over a greater or less part of the body, and, it might be, the mucous membrane of the mouth; a second or quiescent stage occupies from two to five years, during which time the eruption remains *in statu quo*, followed by a stage of retrogression, when the eruption gradually disappears, the patient generally becoming well by the time puberty is reached.

The pigmentation appears to be due partly to an increase of the ordinary pigment in the cells of the rete-malpighi, and partly to the decomposition of red blood corpuscles effused into the tissues, as well as to abundance of these granular cells called by Ehrlich "mastzellen."

The child has always been a healthy and hardy one, so that there is no assignable diathesis, nor are there any digestive irregularities at all likely to aid us in elucidating the etiology of this affection. Its family history, moreover, elicits nothing beyond the fact that a little brother a short time ago suffered from a form of circumscribed œdema of the forehead, which would merely go to show some slight family predisposition to vasomotor instability.

Dr. FIASCHI read some notes on a case of partial excision of the elbow joint for ankylosis after fracture.

PARTIAL EXCISION OF THE ELBOW-JOINT FOR ANGULAR ANCHYLOSIS, FOLLOWING FRACTURE.

By T. FIASCHI, M.D., HON. SURGEON,
SYDNEY HOSPITAL.

PARTIAL excision of the elbow-joint for disease has not so far been very successful, but for the treatment of ankylosis, either rectilinear or angular, following fractures or unreduced dislocations, it can be adopted in the majority of cases with better results than could be expected from complete excision. The reason of it is that complete excision secures great mobility of the elbow at the cost of strength; arms whose elbows have been completely excised remain weak even in the best of cases. Now, with labouring men, strength of arm is an important consideration, and it is better for them to have an arm with incomplete mobility at a good angle, and strong, than a very mobile new elbow-joint with a weak arm. Partial excision may not restore complete mobility, but will, if the usual precautions be taken of not injuring important nerves, leave the original strength of the arm unimpaired.

Whenever a case presents requiring orthopedic excision—that is, excision for the object of correcting a faulty position or ankylosis—if we have reason to think that portion of the joint is uninjured, we should leave that untouched, and so plan our operation that only the injured part be excised. Let not the word partial mislead the surgeon as to the comparative ease of the operation, for the partial requires far more care than the complete excision.

These principles I tried to put in practice in the following case:—

L. P., æt. 18, station hand, was, on the 1st December, 1894, admitted in the Sydney Hospital with rectangular ankylosis of his right elbow-joint. He stated that seven months previously, whilst riding a horse at a brisk canter, and carrying at the same time a parcel under his right arm, he struck his right elbow against a gate post and fractured it. His arm was kept in rectangular splints for three weeks, after which gentle passive motion was begun, without any good result; for the extent of motion remained extremely limited. On examining his arm, I found it flexed at an angle of 110 degrees, than which it was incapable of further flexion. On trying to extend it, I could move it but very little, the angle of maximum extension not being more than 115°. The hand could not be well pronated nor supinated, rotation of the radius being imperfect. On palpation, the olecranon presented itself with normal

outline and in normal position, the ulna having remained uninjured; the radius seemed displaced outwards at its superior end, and on trying to rotate it a distinct crepitus could be felt near the head of it. A mass of bone of the size of a walnut seemed thrown in front of the elbow-joint, and on using a certain force this mass could be moved slightly from side to side, as if quite separate from the rest of the elbow-joint.

On the 5th December the joint was manipulated under chloroform, but it felt solidly fixed, and no gain was made in the movements of flexion or of radial rotation. In the movement of extension we were able to bring the forearm down to an angle of 140°. I thus ascertained that by forcible manipulation but little could be obtained, that the inner half of the joint was unaffected, and that the outer half was interfered by the presence of a detached mass of bone preventing flexion and extension of the whole joint and rotation of the radius. Urged on by the desire of the patient, who considered that the arm in its present state was of little use to him, I decided to cut down on the outer side of the elbow-joint, and remove the blocking mass of detached bone.

On the 10th December, 1894, under ether, a T-shaped incision was made over the head of the radius, having the cross stroke level with the interarticular space, and the long one parallel to the axis of the radius, and extending down not more than one inch and a-half, so as to avoid the muscular branch of the radial nerve. Having struck the space between the anconeus and extensor carpi ulnaris muscles, the knife was pushed through it to the bone, and the head of the radius exposed. Having detached the periosteum all round it, this was excised above the bicipital tuberosity. This made room for my finger to explore the loose mass of bone, which was found most irregular and laying in front of the elbow-joint. By means of the excision knife and periosteal elevator, I gradually separated this from all the neighbouring soft parts and attachments, and then, finding that it was still holding fast, I split it in two with a chisel. This enabled me to remove with a bone forceps the external part of it, but the internal continued to cling round the coronoid process of the ulna, baffling all attempts to pick it or lever it out.

Judging that there was some attachment on the ulnar side to which I could not get from my incision on the radial side, I made a vertical incision one inch long just under the internal condyle, so directed as to avoid the ulnar nerve. Through this the periosteal elevator was pushed

down to the bone, and the inner attachments of the loose mass separated, after which it was an easy matter to extract it from the radial incision.

The detachment and removal of this mass of bone was a tedious and difficult step, but, fortunately, it was accomplished without any injury to the important structures on the front of the joint. On moving now the elbow, I found that I could completely extend it, and had complete pronation and supination of the hand, but that I could not flex the forearm on the arm beyond the right angle. The obstacle to such flexion was a deposit of callus in the coronoid depression above the trochlea, which nothing short of excision of the lower end of the humerus could remove. For the reasons already given I withstood the temptation to do so. No arterial hemorrhage followed, and four weeks after the operation the wound was completely healed. At first there was considerable stiffness, but passive motion and massage overcame it. When I saw the patient three months afterwards I found that he could completely extend his forearm, having a range of movement of 80° instead of 5°, as he had before, but that he could not flex his arm past the right angle. The portions of loose bone removed were not easy to identify, but on careful examination I believe them to be the external condyle and the capitellum.

On criticising the results I find that the advantages gained by the operation are an increase of 75° of movement of the elbow-joint, with complete return of supination and pronation of forearm, and the advantage missed is the power of flexing the forearm on arm at an angle more acute than the right angle. This failure I consider more than counter-balanced by the fact that the arm has not lost any of its original strength; and, remembering Ollier's statement, that an arm bent at an angle between 100° and 110°, having a mobility of from 20° to 25°, is an arm sufficiently useful for a labourer¹, I feel satisfied with the result obtained. This subject of partial orthopedic excision of the elbow-joint, though generally ignored by the text-books of surgery, is not a novelty. Ollier deals with it exhaustively in his classic work on resections, and there have been methods of operation and cases recorded in various publications by Annandale², Heron Watson, Davies Colley³, Kirmisson⁴, and others.

1. Ollier, "Traité des Résections," 1888, vol. II., page 274.

2. "On a New Method of Excising the Elbow-joint in Cases of Anchylosis."—*The Lancet*, 1872, vol. II., page 877.

3. *The Brit. Med. Journal*, 1889, vol. I., page 245.

4. Kirmisson, "Maladies de l'Appareil Locomoteur," 1890, page 295.

Dr. CLUBBE said the members must feel obliged to Dr. Fiaschi for his paper. It was gratifying to know such good results had been obtained by Dr. Fiaschi by partial resection. As regards the question of the length of time which should be allowed to elapse before passive movement should be commenced, it depended entirely upon the circumstances of the case. Some recommend ten days, others as much as three weeks, but it really was better to be guided by the progress of the case.

Dr. SYDNEY JONES said : Dr. Fiaschi was indeed to be congratulated upon the satisfactory results of his operation. He (Dr. Sydney Jones) did not think the removal of the lump of callus mentioned by Dr. Fiaschi would have weakened the joint in any way, and the flexion of the forearm would have resulted if the lump had been removed.

Dr. FIASCHI, in reply to Dr. Thring, remarked that it was impossible to prevent ankylosis in all cases of fracture running in the elbow-joint. When the external condyle was detached, as in this case, the best thing to do was to press it back in its proper place and fix it there, either by means of a pad or of an aseptic acupressure pin driven through it into the sound bone beyond it. The latter course was suggested in Treves' last book on surgery. In spite of all treatment, there would always be a percentage of cases in which ankylosis would inevitably follow, and for which the only possible treatment would be excision, either partial or complete. He quite agreed with Dr. Jones' remarks, that possibly the excess of callus preventing complete flexion might have been gouged away with advantage to the patient, but his reason for not doing so was that he did not wish to do too much and obtain mobility at the expense of strength. He had gouged away more callus than was apparent in the specimens exhibited, and, considering the small size of incisions, he did not at the time consider himself justified to do more.

Dr. WILKINSON read the following :

NOTES ON TWO CASES OF PAPILLOMA OF THE LARYNX.

By W. CAMAC WILKINSON, M.D., M.R.C.P.
LOND., HON. PHYSICIAN TO EAR AND
THROAT DEPARTMENT, SYDNEY HOSPITAL.

TUMOURS of the larynx are not common, and the commonest form is papilloma. One very curious case is reported by Stoerck, in which the removal of one-half of a fibroma was followed by a papillomatous growth in its place. Inasmuch as a man with such a world-wide reputation as Morell Mackenzie reports only about 100 cases, while such operators as Stoerck and Schnitzler, of Vienna, have published but 35 and 36 respectively in their far-reaching experience, it goes without saying that tumours of the larynx are not common. In the last year I have had under my care three cases in private practice and one case in the Sydney Hospital. One case of fibroma or fibrous polypus was in a young man *æt.* 23. The growth was quite small, a mere projection at the edge of the vocal cord, near its anterior end. It caused more or less loss of voice and hoarseness. I advised removal, but as soon as I assured the

patient that it was not a cancer he declined any operation. Another case of fibroma I discovered by accident in a man *æt.* 54, who came to consult me about his son, then suffering from a severe nasal obstruction. The father lost his voice eight years ago, but had consulted no one about it. The very quality of his voice suggested a growth which the laryngoscopic examination at once revealed. The growth is large (as large as a large pea), roundish, pale in colour, and somewhat papillated on the surface. Usually such growths reach a certain size, and then cease to grow. It has been large enough for the last eight years to cause a loss of voice, and at the time of life of the patient, unless symptoms of dyspnoea occur, masterly inactivity is the best course. I have told the patient to keep himself under observation.

The case may require interference, but in such cases, even during the operation, or soon after it, tracheotomy may have to be done.

The two cases of papilloma, to which I would now refer, have been subjected to operative procedures. The tendency to recurrence in papilloma is so great that one cannot tell the ultimate result till time has established it. In one case the result is so far entirely satisfactory ; in the other disappointing.

Case 1.—Mrs. R., *æt.* 37, was sent to me by Dr. F. W. Hall, College-street, with the diagnosis of a tumour at the posterior end of the right vocal cord. In writing to confirm this diagnosis, I added that it appeared to be a papilloma, and advised that it should be removed by an endolaryngeal operation, and the root subsequently cauterised with the electro-cautery. Dr. Hall then placed the patient under me for operative treatment. The patient, though somewhat nervous and timid in disposition, reconciled herself to the situation, and behaved very well throughout. I removed the mass of the growth lying immediately over the cord with ease at the first attempt, and at the end of a week removed the remaining portion that projected beyond the edge of the cord. After this second operation, the upper surface of the cord was quite smooth, and the cord uninjured. There still only remained a small, reddish, smooth projection, which I touched with the cautery two or three times. Each operation caused a certain amount of irritation for a day or two afterwards, but still the patient continued her duties—altogether against my advice—in selling behind the counter. I interdicted these duties after the cauterisation, and now a laryngoscopic examination reveals little to attract notice. Still, on careful inspection, there is a slight reddish thickening. This has been under

observation now for some months, and has not increased in size. There is one point of interest in the ætiology of this case. The patient has sung much, and says she is especially good at high notes. Although the origin of tumours is still wrapt in obscurity, there is little doubt that irritation, especially long-continued irritation, plays some part. The warts of gonorrhœa and condylomata of syphilis are illustrations in point. Epithelioma is often the result of irritation, as witness epithelioma of the scrotum in chimney sweepers and epithelioma of the lip and tongue. Epithelioma of the skin, too, may be caused by picking and scratching. It is further a remarkable fact that in animals the progressive growth that sometimes appears at the seat of certain forms of brand is nothing else than typical squamous epithelioma, just the same growth, in fact, as appears in the skin of certain Indian races, who wear hot braziers. It is therefore reasonable to suppose that in papilloma of the larynx over-use of the voice may be a determining and not merely an exciting element. Chronic catarrh of the cervix uteri is a frequent precursor of cancer of the cervix, and chronic catarrh of the larynx from strain may lead to papilloma. Certainly, tumours of the larynx, especially papillomata, are most frequent in those who use their voices greatly, professional singers, etc. It is said that even 50 per cent. of the cases of papilloma occur in those whose vocation demands constant and often excessive use of the voice. Though over-use may be a determining cause, the actual exciting cause may be a cold, a chill, a fever. Still tumours of the larynx may be congenital, and accordingly independent of such conditions. Papillomata are not uncommon in the young, and more frequent in boys than girls. Is this due to the excessive use of the voice? On the other hand, no such explanation applies to the occurrence of papilloma in a deaf mute. The diagnosis was not altogether free from difficulties; the situation was exceptional for a papilloma. As a rule, a tumour situated at the posterior end of the cord, actually impinging on the posterior commissure, first excites the suspicion of a malignant growth. The appearance in the laryngoscope was papillomatous. The growth had neither the form nor the colour of a fibroma. To the naked eye it might have been still open to question whether it was not a papillomatous epithelioma. I had seen in a man who came to the hospital for treatment a growth similar in appearance which on microscopic examination proved to be epithelioma. The diagnosis, however, is settled by the examinations of the sections on the table.

The second case was a legacy from Dr. Brady that carried great responsibilities. The little patient, D.E., æt. four, came to the hospital for aphonia. She could not, and did not, speak; even at home she was voiceless. There was no dyspnoea; no cough. She was so young that laryngoscopic examination was impossible, though the attempt was made. After attending for some months at the out-door department, she was brought to the hospital in an extreme state of dyspnoea, and Dr. Brady did tracheotomy. Subsequently—I regret to say during my absence from town—he opened the larynx and removed the growth, cauterising finally with Pacquelin cautery. Towards the end of March—that is, within three months of the first operation—the child was again brought to the hospital. She had great dyspnoea and marked recession of the chest. On March 29th I did tracheotomy. During the operation at one time I feared the child might suffocate before the trachea was opened. I allowed the child to recover some of its strength, and on April 7th I performed laryngotomy. The larynx may be subjected to various operations, according to circumstances, especially in adults. Thyrotomy, infrathyroid laryngotomy, or subhyoid pharyngotomy. Laryngotomy or laryngofissure implies the dividing of the thyroid cartilage. In adults one is advised to open the lower half of the thyroid cartilage, so as to save the vocal cords. The injury to the vocal cords and the loss of voice may not be so much the effect of the operation as of the disease. In this case there had already been an operation on the larynx, and the voice did not return after it. At any rate, after trying to open the thyroid in its lower half for some time, I gave up the attempt, and divided the trachea from the tracheotomy wound, and thence divided the cricoid and thyroid. Then the papilloma appeared in the left side, and completely filled the laryngeal passage.

The right cord could be seen, but the left cord was completely enveloped in the papilloma.

I cut away the tumour in small pieces, and then cauterised the surface very thoroughly with the galvanic cautery. During the operation the child's head was hanging over the table, and at first the electric light, and later direct sunlight, was used for illumination. The operation was very tedious. In the first place, the previous operation had caused some displacement of parts, so that it was not easy at once to reach the thyroid. Then the child's neck was so short that it was necessary to divide the larynx and trachea from below, although some time was spent in trying to avoid this extensive

opening. The bleeding was a source of delay. Besides, in the small passage the retractors were continually slipping away from the wings of the thyroid. The greatest delay of all, however, was a necessity of the circumstances. Throughout the operation the operator and chloroformist were alternately employed. I had to stop as soon as the reflex returned, and the anæsthetist had to stop as soon as the reflex was gone. No one could have exhibited more patience and skill than Dr. Binney under the trying circumstances. He did his work so well throughout that at no time was there any sign of a livid colour. It has since occurred to me that time might be saved by the use of cocaine in these cases. When the operation was done I put some fine sterilised catgut sutures, four in all, through the thyroid, cricoid, and trachea, and closed the wound with deep sutures reaching to the perithyroid tissue.

The wound healed by first intention. There was a good deal of swelling around the larynx for a couple of days, but this was never serious, and it passed away. The temperature remained normal throughout. The child continued to wear a tracheotomy tube for some weeks. Several attempts were made to dispense with the tube, but dyspnoea followed the closing of the wound after a time when such attempts were made. Fearing that, perhaps, cicatricial contractions had occurred in the larynx, I determined to introduce an intubation tube. Under chloroform, the tube was introduced on two different occasions, but was not long retained. The chloroform, perhaps, was a mistake, but the child was excitable, and I used it. At the second attempt the tube went in easily, and showed that the passage was open. Then the tracheotomy tube was left out, and shortly after the child left the hospital, breathing easily and in splendid condition. She could make herself understood, through not by any distinct voice, and her mother affirmed that her voice was better than it had been for more than a year. The sequel remains to be told. In the beginning of August the child came back again with the symptoms of severe laryngeal obstruction. I had again to do tracheotomy, and the operation proved very far from easy. The child was in a condition of such extreme dyspnoea that the operation had to be done without chloroform; and after making the incision through the old scar it was found that the trachea had been drawn over to the left side. At length the tube was introduced, and since then the child has improved daily. It now remains for one to perform a third operation on the larynx. The obstruction is due to a recurrence, for since she

has been in the hospital I have trained her to allow a laryngoscopic examination, and the growth can be seen.

Dr. W. F. QUAIFF said that the meeting was very much indebted to Dr. Wilkinson for the interesting report which he had just read. There was no reasonable doubt that these cases begin with a congestive condition, due, in many cases, to over-use, and that the comparative rarity of their appearance in this country might perhaps be attributed to the unwillingness of a low stratum of society, such as hucksters, &c., to apply for treatment. It was nevertheless a curious fact that two of his own cases were of ladies who probably never over-used their voices in any way—not even in song. The question of recurrence was important. The idea prevailed that the grey kind were less recurrent than the pinker ones. Personally, he did not think so, for two or three reasons. The colour of a papilloma was due, practically, to the thickness of the epithelial layer upon it, and, as this often varied considerably in different parts of a large growth, the idea was reduced to an absurdity. So far as he knew, no embryonic tissue was ever made out in a papilloma. After all, he did not believe that in adults these growths were so frightfully recurrent, and thought that thorough extirpation solved the difficulty. Dr. Wilkinson did not name the instrument he used; his own prejudice was in favour of a cold snare, where necessary, with a screw or lever attachment, resembling in principle Mackenzie's nasal snare. Where the growth was sessile, a cutting forceps was of course required. Afterwards, the careful application of a small bead of chromic acid to the neck was, he thought, the best destruent. The electric point caused a superficial charring, whose non-conducting quality prevented the deeper part of the diseased tissue from being attacked. The chemical did not fail of activity in this way, and yet could be limited by suitable precautions. He believed that, among others Bosworth and Lennox Browne followed substantially the same method, which, he might add, had been taught him by Schnitzler, of Vienna. In youthful tissues the tendency to recurrence was very much more marked than in older ones. Warty growths were extremely profuse on some children's skins, and in some like way, no doubt, they might occur in children's larynxes. He had tried a solution of acid salicylic in glycerine with some success in a case of this kind, where the patient, the growth being small, had refused operation; but the case never came to a definite close. There was no doubt that the recurrent papillomas of children were an unsolved problem. The case described by Dr. Wilkinson reminded him very much of one he had seen some years ago in Dr. Clubbe's wards, a description of which that gentleman would no doubt favour the meeting with.

Dr. CLUBBE said he remembered a case at the Children's Hospital. The child was too young to be examined by the laryngoscope. In this case the larynx was opened about twelve times, and all kinds of remedies were used. After a time the growth ceased to recur, but there remains a small opening which will be left until the age of puberty has arrived, when it will be closed up. The lad can talk fairly well.

Dr. WILKINSON said he did not agree with Dr. QuaiFF about the use of the cold snare; it might be useful in some cases. As to the use of the electrical cautery, he (Dr. Wilkinson) had given up the use of all caustics, and used the electric cautery instead, which was safer altogether. If the operator were used to cauterizing,

there was no difficulty in deciding when the growth had been destroyed. There was nothing definite about the recurrence of the growths in the larynx. The experience of Dr. Clubbe went to show that too much interference was not justifiable, but he (Dr. Wilkinson) would again open the larynx in the case under review.

Dr. SPENCER read a paper on "Morbid Alvine Secretions," which will appear in our next issue.

Dr. WILKINSON said that Dr. Spencer's paper had a two-fold character. It contained points of scientific interest, and there was a humorous element in it that was refreshing by reason of its novelty on such occasions. Dysentery was a term that included widely different processes. The changes in the large intestines, catarrh (often hemorrhagic), necrosis, and ulceration were common to faecal irritation in lunatics; septic inflammation, especially in puerperal women, and tropical dysentery; but the nature was very different in each case. The dysentery of children was another form. There was some evidence in favour of the view that one form of dysentery was caused by amebae. An elaborate investigation in Egypt and Italy by Kruse and Pacquale strengthens this view. Amebae could be found in the alvine discharges in most cases, far more frequently than in normal faeces. They were occasionally present in normal faeces, but they were certainly present in dysenteric discharges. Amebae are found, too, in large numbers in the tissues joining the wall of the ulcer. The amebae were confined chiefly to the sub-mucous tissue. Moreover, in tropical abscess of the liver, so often complicating dysentery, the pus had in some cases been found sterile, and yet contains amebae. By sterile pus I mean pus that yields to cultures media no growth of micro-organisms. Lastly, experiments had been made upon cats. It is well known that cats may suffer from an epidemic form of dysentery. Injections of pus from sterile abscesses of the liver and of dysenteric discharges had given positive results when the material had been retained in the bowels by sewing up the rectum. Similar experiments with ordinary faeces produce no such effect. It would, therefore, seem that the amebae were related to the process.

Dr. WORRELL said he had listened with much pleasure to Dr. Spencer's highly interesting and original paper. He had frequently seen mucous casts of the bowel expelled in the disease known as pseudo-membranous colitis, which occurred chiefly in neurotic women, and was difficult to cure. The motions were usually extremely offensive. His treatment had been tonics, intestinal antiseptics, irrigation of the bowel with weak iodine solution, and regulation of the diet. The colon often became greatly distended and accumulated, so that, although the bowels might be moved daily, hard masses of faeces might linger in by-ways of the bowel for weeks. He should like to hear the strength of the nitrate of silver solution which was used, and the quantity.

Dr. SPENCER, in reply, said that the strength of the nitrate of silver was from three to nine grains to the ounce. Text-books gave the strength as half-grain to the ounce, but he (Dr. Spencer) had found from experience that the greater strength was more useful.

MR. COURTENAY SMITH, founder and director of the Echo Home for Inebriates, Middle Harbour, advertises that he is preparing to receive gentlemen in a private establishment, for the treatment of inebriety, in which he has had a large measure of success.

THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting was held in the rooms of the Austral Salon, Melbourne, on Wednesday, September 26th, at 8 p.m. Present: The President (Dr. Snowball), in the chair, Drs. Read, Black, Meyer, Springthorpe, Hamilton, Syme, Harricks, A. V. Anderson, Officer, Noyes, Hughes, O'Hara, Hooper, Lloyd, O'Sullivan, Boyd, Steel, Rosenblum, Sutherland, and Henry.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Medical Society of Victoria, asking that the Branch appoint three members to meet a similar number from the Society and from the Melbourne Medical Association, with a view to some conjoint professional action *re* some alteration in the method of electing the staff to the Melbourne Hospital.

Upon the motion of Dr. O'HARA, seconded by Dr. HARRICKS, the President, the Honorary Secretary, and Dr. Hamilton were appointed to represent the Branch.

A letter was also read from Dr. Willis, of Daylesford, *re* the action of justices in ordering burial without a *post-mortem* in cases where a medical man had declined to give a certificate of the cause of death.

Dr. MULLEN pointed out that such action was illegal, but that the question was rather one for the Medical Defence Association.

Upon the motion of Dr. HUGHES, seconded by Dr. SYME, the matter was referred to the Defence Association.

THE PRESIDENT announced the election of the following new members:—C. F. Lethbridge, M.R.C.S., L.S.A., Alexandra; T. W. Brown, M.B., B.S. Melb., Broken Hill; M. McKenzie, L.R.C.P. *et* S. Ed., Balwyn; T. Murphy, M.B., B.S. Melb., Bendigo; H. L. Murray, M.R.C.P., F.R.C.S. Ed., Caulfield.

EXHIBITS.

1. Dr. SNOWBALL exhibited a case of ununited fracture of both bones of the leg in a child aged two and a-quarter years, with a well-marked false joint, with the following note:—

G. L., two and a-quarter years old. Mother confined in the country; no doctor; said to be an easy labour. Nothing unusual about the child till ten days old, when noticed to have some deformity about the leg. Nothing done till ten months old, when taken to Maroopna, and there put in splints, which were kept on for some time.

The present condition is one of ununited fracture of both bones of leg, with a well-marked false joint. As well as can be judged, the lower fragments have grown in proportion, in fact, I expect to find they are better developed than the lower ends of the upper fragment.

While vicious union of fracture received at birth is common, non-union is rare.

2. Dr. OFFICER exhibited a case of (?) congenital head disease in a child aged nine, with the following note:—

A. J., aged nine; mother rheumatic; others healthy. Never blue as baby, but always delicate. Had had scarlatina and marasmus, but apparently no rheumatism. Troubled with cough, headache, and dyspnoea, especially on exertion. At times bluish, frequently cold in the extremities, but no oedema of the feet.

Præcordium prominent. Cardiac dulness increased upwards, downwards, and to the left; loud systolic bruit at the apex, well conducted laterally and posteriorly, with irregular reduplication of the second sound in the aortic area; no thrill; pulse very small; 92, and regular.

Dr. SPRINGTHORPE was inclined to regard the case as one of peri-endocarditis, after slight rheumatism.

3. Dr. NOYES exhibited the following cases of disease of the skin:—

(a) *Pityriasis Rubra.*

W. N., aged 62 years. Family history good, and the patient had always enjoyed excellent health. The only previous skin affection with which the patient has suffered was a mild pustular folliculitis of the legs, which had almost subsided when the *pityriasis rubra* commenced, the onset of which occurred after a prolonged walk on a very hot day in November last. The patient perspired a good deal, and on his return home he felt "as if his skin were on fire." This burning sensation lasted for a few days, and then the skin became suffused with a bright scarlet eruption, affecting every portion of the body surface. Desquamation now set in, and both the redness and scaling continued uninterruptedly for about six months. When I first saw the case, in January, in consultation with Dr. Langlands, the desquamation was at its height; the scales were then dry and papery, and were shed in immense quantities, being constantly renewed. There was never any exudation at any time, nor was there any marked infiltration of the skin.

The general health was not much affected, though the patient complained sometimes of some feeling of debility, and on three or four occasions there was a slight rise of temperature. The case was a most typical example of *pityriasis rubra*.

The treatment adopted was soaking and emollient. At first *linimentum calcei* was freely used, the patient being wrapped from head to foot in bandages soaked in the liniment. Afterwards a combination of equal parts of lanoline and olive oil was substituted; emollient and sedative baths were freely given, and finally, in the later stages, a course of arsenic was adopted, which completely cleared up the condition.

The patient that I now bring before your notice is in excellent general health, and is quite free from all trace of skin affection.

(b) *Acquired Syphilis in a Child Two Years Old.*

J. M., a well-grown female child, aged two years. Six weeks ago a small papule appeared upon the left labium. This was disregarded by the mother until a generalised eruption appeared upon the child's skin. She was then brought up to my skin department at the Melbourne Hospital. The general characters of the eruption—its colour, multiformity, and distribution, without pruritus—together with the general adenopathy and lesions in the buccal mucous membrane, put the diagnosis of syphilis beyond the shadow of doubt. The family history is interesting. The father of the child acquired syphilis twelve months ago. He transmitted it to the mother (both patients had been under my care since the beginning of the disease), and the mother had probably, by mediate communication, transmitted it to the child.

An eruption of congenital origin like that present on the child's skin could not appear at the end of the second year without the child having manifested some evidences of hereditary taint at an earlier period. It is further doubtful whether such eruptions (macular and papular) even occur so late in the hereditary form. Besides, if syphilis had been transmitted by the mother

to the child *in utero* it would have been impossible for her (the mother) to have contracted the disease a second time, for women who have borne syphilitic children—though they may show no evidence of syphilis themselves—are immune to syphilitic inoculation. There is, therefore, no doubt that the case shown is one of acquired, not congenital, syphilis.

(c) *Hydroa Puerorum.*

The eruption in this patient, a boy of 10 years, commenced twelve months ago on the ears; it then attacked the hands, and finally the nose and cheeks. Fresh attacks are produced by exposure to cold winds, uncovered parts only being affected. The lesions commence as vesicles, varying in size from a pin's head to a split pea, or slightly larger. Umbilication occurs in the centre, giving a vacciniform appearance; a scab forms, spreading from the centre of the vesicle; finally the scab is shed, leaving a scarred condition. This case, of which there are very few examples on record, will be more fully reported when the course of the disease has been more thoroughly investigated.

(4). Dr. SYME exhibited the patient from whom a tubercular kidney had been removed on January 16. She was now in perfect health. (For notes of the case, *vide A.M.G.*, May, 1895, page 194.)

Mr. G. A. SYME shewed the following cases:—

Hydatid of Liver, Treated by the Intra-peritoneal Method.

The patient, aged 18, was operated on on the 27th of August. The cyst was a large one, and full of daughter cysts. The adventitia was carefully sponged out, then irrigated with sterile boric acid lotion until it appeared clean and empty. On looking into the cavity, however, some daughter cysts and debris were observed. These were removed and the adventitia dropped back, and the abdominal wound closed. On the evening of the 28th August the temperature rose to 102.2° F., falling to 100° F. in the morning, and for several days fluctuated between 100° F. and 98.4° F. The patient had no pain, and did not seem at all ill. On the 9th September the dressings were found soaked with bile and pus, and it was found that the incision had given way and allowed bile to escape through it. The temperature immediately became normal. Bile discharged for five days, then the wound closed, and the patient left the hospital on the 19th September.

Tubercular Disease of the Ankle-joint and of the Sheaths of the Extensor Tendons. Erosion of Joint. Recovery, with Movable Joint.

This patient, a girl of 18, had had pain and swelling of her right ankle for over a year, but worse since November, 1894. The pain kept her awake at night, and she had difficulty in walking. The joint was much swollen. On July 20, 1895, the joint was opened, and the synovial membrane found thickened and pulpy, and the sheaths of the tendons filled with granulation tissue. The joint and tendons were thoroughly scraped, and iodoform emulsion injected. Fourteen days afterwards the wound was soundly healed, and a plaster of Paris splint was applied. She has now no pain, no swelling, and the movements of the joint are perfect.

(5). Dr. SPRINGTHORPE exhibited a case of brain tumour in a young man aged 21. There was a four-and-a-half-years' history of headache, vomiting, and double optic neuritis, the vomiting being the least marked. As localising symptoms, there were left frontal and right occipital exacerbations of pain, some tremors of the left arm, consecutive atrophy, and com-

plete blindness in the left eye (vision in the right eye remaining good, but soon tired); constant tinnitus in both ears, attacks of giddiness, uncertainty of gait, and tendency to fall backwards and to the right, with slight exaggeration of the reflexes, and some increase in the size of the head. After being in hospital a few weeks patient went out. Twenty months later (Aug. 26, 1895) he came back, complaining of very severe headache, localised as before, with staggering gait, especially if not watching the ground. There is tinnitus, but no deafness; marked optic neuritis in the right eye, with consecutive atrophy and blindness in the left; no tremors or pareses; no further increase in the size of the head; very poor memory, and slight hesitancy of speech; vomiting only exceptional.

A tumour of the lower parietal lobe of the right side (centre of "crossed amblyopia"), at first irritating the middle third of the ascending frontal convolution (left arm centre), with more serious implication of the posterior part of the first temporo-sphenoidal convolution (auditory centre), and permanent effect (possibly from pressure, but perhaps from origin) upon the right and mid lobes of the cerebellum (hence the unsteadiness, the falling back and to the right, the giddiness, and enlargement of the head), without any marked effect on pons or medulla, would account for all the symptoms.

Dr. O'HARA then read his paper,

NOTES ON A CASE OF ECTOPIC GESTATION AND ITS SEQUEL.

By H. M. O'HARA, F.R.C.S.I., SURGEON TO THE ALFRED HOSPITAL, MELBOURNE.

BEFORE reading my notes on this very interesting case, I wish you to clearly understand that I do not come here to-night "to air a grievance." I merely beg your attention to the paper, and ask your opinion on the treatment of such a case.

There are members present who, like myself, have had large experience in abdominal surgery, and I much regret that the gentleman with whom I have previously argued the line of treatment (not being a member of our Society) is not present, as our relations in the matter have all through been of the most cordial nature.

I was summoned to see Mrs. L., at her residence, Bridge Road, Richmond, and on my arrival found her suffering from intense pain in the right iliac region, shooting into the rectum. She had an anxious look, and begged for some opiate to relieve her. She had vomited at intervals for some days, and complained of great thirst. Her tongue was slightly coated. Her pulse 80; temperature normal, 98.8°.

On examination, a tumour about the size of a cocoon could be distinctly felt in the right iliac region, tense and fluctuant. Its superior border just reached M. Burney's point, the anterior aspect pressing against the abdominal parietes. The inferior border filled the right

fornix. The uterus was pushed upwards, and to the left side. The patient gave a history of a three-months pregnancy. She had had a family, but no child for some years. Her age was 32 years, and she was well nourished.

I concluded that it was a case of tubal pregnancy of about 13 weeks' gestation. The pear shape of the tumour was suggestive of the sac having given way, or insinuated itself between the layers of the meso-metrium.

After making my examination, the husband informed me that a medical man had been treating her for five weeks, and about a week ago had called in a surgeon in consultation.

Under these circumstances I at once went to the medical attendant, informing him of my visit, and advising operation as soon as the patient could be moved to a more sanitary locality, and expressing my willingness to meet him and share the responsibility of the case.

I received no reply to my communication, so my connection with the case, as far as treatment was concerned, ended.

The husband, however, called in the next morning, and informed me that another specialist had been called in, and gave it as his opinion that my suggestion of abdominal section was far too desperate a procedure, as the patient would most certainly die from furious hæmorrhage.

He advised puncture of the cyst and withdrawal of the liquor amnii through the roof of the vagina, holding out a hope that by this means further operative procedures might be unnecessary.

I was so astounded on hearing this that I communicated with the consultant, and he courteously replied: "I have advised drawing off the liquor amnii by the vagina, and subsequent vaginal operation, if necessary."

Now, gentlemen, my opinion, formed by long experience, is that all cases of tubal foetation should be treated by abdominal section, whether the sac with its contents can be removed entire, or whether the sac, having been emptied of its contents, is united by its cut surface to the abdominal parietes, shutting it out from the peritoneal cavity. If the placenta can be removed at the time of operation, so much the better for the patient; but, failing its removal, the risk of peritonitis is remote when the peritoneal cavity has been shut off and strict asepsis maintained.

Bland Sutton, in his work on "The Surgical Diseases of the Ovaries and Tubes," says:—

"The admirable results which have followed the treatment of tubal pregnancy by abdominal section have served to establish this method on

as secure a footing as ovariectomy." "Methods formerly advocated, such as killing the fœtus by injecting drugs into its body, or more recently by electricity and similar surgical procedures, are of such an unsatisfactory character that they will not be considered." "When gestation has not advanced beyond the fourth month it is possible to remove the embryo tube ovary and adjacent portion of the broad ligament with the placenta, and to thoroughly remove all blood clot. Then, by transfixing the broad ligament and tying the parts with silk ligatures, the cavity may be completely obliterated, and the ovary, with that portion of the tube on the distal side of the ligature, cut away."

Dr. Herman, in 1887, in a paper communicated to the Obstetrical Society of London, clearly showed the superiority of the abdominal operation over the vaginal in all cases except those in which the fœtus has decomposed and the macerated remnants of its body are being discharged through a fistulous tract opening into the canal.

Pozzi places puncture of the cyst amongst the archaic or condemned methods, and recommends laparotomy as the operation. He says that, when undertaken before the fifth month of gestation, it does not present any notable difference from the removal of a serous, blood, or purulent tubal cyst.

Buldy, in the "American Text-Book of Gynecology," says:—"If large, and extending high in the pelvis, celiotomy is probably the better operation."

Hart and Barbour, "Manual of Gynecology," say:—"Tapping should not be employed unless the nature of the tumour be doubtful, in which case it is necessary for diagnosis. The sudden evacuation of the sac has been followed by contractions, complete rupture, and death."

Greig Smith says, with reference to tapping the cyst:—"A few successes and more failures have since then been recorded, and the plan has now been practically abandoned." "A dispassionate consideration of the natural termination of the disease, and of the effects of minor modes of treatment, almost drives me to the conclusion that at all stages, and under all circumstances, abdominal section is the best treatment."

Balls-Headly, in his "Evolution of the Diseases of Women," speaking of tapping the cyst, proceeds to say—"The vitality of the ovum having been thus destroyed, the life of this escaping clot (through the puncture) is also effected, and necrosing bodies are thus determined, both adjacent to and in the cavity of the

peritoneum or in the broad ligament. Peritonitis or cellulitis presently ensues, the temperature steadily rises, and early abdominal section has to be performed, but perhaps too late to save the woman, in the event of septic infection of the connective tissue."

In the face of this overwhelming testimony, you can understand my astonishment on hearing that the abdominal section I had recommended was to be put aside in favour of tapping the cyst, in the hope of producing mummification, at the risk of decomposition. And in this particular case the risk was heightened from the intricate relation between the wall of the tumour and the rectum, thus giving every opportunity for the action of intestinal gases on the pent-up fœtus.

In conclusion, the line of treatment I recommended was early laparotomy, and an attempt to remove the entire tube and its contents, with any portion of the meso-metrum forming the inferior wall of the sac; and I hold that such an opinion is the correct surgical one. I believe tapping and subsequent operation was resorted to, and the patient succumbed.

Dr. MEYER thoroughly endorsed Dr. O'Hara's opinion. He found it hard to understand how anyone could now-a-days support such a dangerous and unscientific procedure as tapping in such a case.

Dr. O'SULLIVAN agreed that in early celiotomy lay the only chance. To puncture was to revert to the surgery of the previous half-century. Even electric puncture during the first few months was fraught with very serious danger, whilst the laparotomy was one of the most successful of abdominal operations. As regards the treatment of the sac, he preferred Martin's method to all others.

In reply, Dr. O'HARA expressed his thanks for such expert endorsement. Though he was satisfied that puncture was dangerous, and his the correct surgery, the case had caused him at the time great heart-burnings.

Dr. MULLEN asked leave to bring under notice the recent action of the Defence Association re the publication of filthy and indecent advertisements. The Chief Secretary had promised to bring the matter before the Cabinet, but would like to be supported by the Medical Societies. He moved that the Branch take action accordingly.

Dr. HAMILTON seconded the motion.

Dr. HENRY was afraid the editors of papers might resent our interference, and thought it might be wiser to approach the editors direct.

Dr. MULLEN pointed out that one paper inserted them because others did, and Parliament had dealt with a somewhat similar question of betting.

Dr. O'HARA thought it best to ignore them, and leave the public to find out their worthlessness.

Dr. SPRINGTHORPE reminded Dr. O'Hara that it was filthy advertisements, and not quack nostrums, that were aimed at.

The PRESIDENT believed that the editors would be grateful, rather than otherwise. They wanted to see these advertisements stopped, but while one inserted the others were bound to follow suit.

The motion was then put and carried.

Dr. SPRINGTHORPE shewed an aneurism of the abdominal aorta from a man aged 58. The vessels were generally atheromatous, and the aorta dilated beneath the pillars of the diaphragm. This had ruptured posteriorly, the false aneurism extending up to the root of the neck. Two days later this burst into the right pleural cavity, causing instant death. The right lung was collapsed, and, in addition to the fluid portion of the blood, there was a rib-marked clot, which weighed no less than 4½ lbs., being the largest clot Dr. Springthorpe had seen in a human being.

The meeting then adjourned.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY meeting held at the Adelaide Hospital, on 26th September, 1895. Present—Dr. Lendon (Vice-President), in the chair, Drs. Symons, Evans, A. A. Hamilton, Cleland, Corbin, Hayward, Watson, Hone, W. A. Verco, Gault, Fischer, Cudmore, Russell, Todd, Poulton, H. H. Wigg, and Irwin, and hon. sec. (Dr. Swift).

Drs. T. K. Hamilton and Stirling apologised for their absence.

Dr. A. A. HAMILTON showed a man who had had a ruptured ligamentum patellæ for years, which had never given him any trouble.

Dr. LENDON—(1) A girl, *æt.* 11, from whom a large lipoma had been removed; (2) child with multiple cystic tumours of cranium.

Dr. POULTON—His case of pulsating exophthalmos, for which he had tied the common carotid. The tension was decidedly diminished.

Dr. HONE, for Dr. STIRLING, showed a catheter with a ring of urethra attached. The catheter had been tied into a ladder for a resilient stricture for three days, and had to be forcibly withdrawn, with the result that a ring of the urethra was so tightly glued to the catheter as to be torn away.

Dr. LENDON showed the lipoma removed from the girl he exhibited.

PROF. WATSON shewed—Hydatid of vertebra; a clavicle which had been fractured at the sternal end, also two ribs (1" and 2") which had become fused together; a cirrhotic liver removed from a teetotaler; a tumour removed by Dr. Swift from a boy, *æt.* 11, characteristic of encephaloid sarcoma.

On the motion of Dr. HAYWARD, the minutes of last meeting were taken as read.

The CHAIRMAN drew the attention of the members to the circular re Medical Reference Library, and said the Hon. Sec. would be very pleased to receive subscriptions.

The CHAIRMAN gave notice that at next meeting he would move that a Parliamentary Bills Committee be appointed at each annual meeting; that Dr. Stirling, C.M.G., the President, and the Secretary of the Branch (*ex officio*) and the Hon. Dr. Magarey be appointed to act as such until the next annual meeting. The Chairman explained that the necessity for such a committee had long been recognised by the Council, but the urgency for its appointment had been raised by a letter from Dr. Brummitt calling attention to a Bill which is before the House of Assembly in reference to the compulsory notification of infectious diseases.

The HON. SEC. said he had written to the Chief Secretary asking for a copy of the Bill in question, and had received the reply that a copy should be forwarded when ready.

Drs. EVANS and HAYWARD read their papers on Pneumonia (see Notes), which was followed by an interesting discussion. Drs. Corbin, Cleland, A. A. Hamilton, Wigg, Gault, W. A. Verco, Swift, Russell, and the President took part in it.

ACUTE CROUPOUS PNEUMONIA.

By J. H. EVANS, M.B., B.S., OF

HINDMARSH (ADELAIDE).

ALL recent investigations point more and more to the fact that this very common and important complaint belongs to the class of acute infectious diseases. Assuming this to be the case, the sure cause of it then is a specific germ, and the commonly-ascribed cause, viz., catching cold, ranks only as a predisposing factor. As far as I can gather, the specific germ has not been satisfactorily separated in experiments on pneumonia in man. Mr. C. J. Pound, late of Sydney, now in Brisbane, while working at the disease known as contagious pneumonia of swine, in the Laboratory of the University of Sydney, has isolated the micro-organisms from the lungs of diseased pigs, successfully cultivated them, and carried them through several generations. Inoculations made with these cultures produced the disease in every case.

Pleuro-pneumonia in man does not seem to be infectious in the same degree as bovine pleuro-pneumonia, or as the contagious pneumonia of swine.

Epidemics of this disease have not occurred lately, although they are mentioned in Fagge's "Medicine" as having done so formerly. Extensive epidemics have sometimes been met with. Sporadic cases are constantly cropping up. In Hindmarsh and the adjoining districts, to which my practice is limited, the disease is very common, especially in children of from one to six years. Immunity, if conferred, cannot last long, as a person may have the disease as often as twenty times. I myself have two patients, each about five years of age; one has had it four times—the other thrice.

I do not know whether or not there is any causal relationship between the pneumonia of cattle and that of man in South Australia. That pleuro-pneumonia is prevalent among cattle here is known, though to what extent not so. Cattle suffering from the disease are sold, I believe, and slaughtered, and their meat distributed as food. Such cattle do not come under the notice of the stock inspector, but are disposed of privately.

Taking the classical description as the type, I should say, as far as my experience goes, that the disease is fairly typical in adults, but in

young children one might, without constant and careful examination of the chest, easily overlook it, the gastro-intestinal symptoms being so pronounced and the pulmonary so slight. A persistently high temperature of 103° F., with rapid breathing and very slight cough, make one search diligently for the disease. I am speaking here of children from one to three years of age. The affected part in such cases is frequently the middle lobe of the right lung, or the apex of either lung, generally the right.

Central Pneumonia is fairly common in children, and frequently I have been unable to detect in what part of the lung the disease was located until after the crisis, though from the general symptoms it was evident that the child was suffering from pneumonia.

I quote two cases of pneumonia with delayed resolution, which might be of interest.

No. 1.—A little girl of about four years. Pneumonia of base of lung (unilateral); high temperature for about a week, then a decline to a lower range for several weeks, making one suspect enteric fever. During this period dulness spread over the whole of one side of the chest, the physical signs suggesting that there was fluid in the pleural cavity. Repeated exploration with negative results disproved this. The temperature gradually came down to normal; improvement in the lung took place, and finally the natural sounds returned; the patient, after an illness of nearly three months, making a good recovery.

No. 2.—A little boy, aged six years. He began with right apical pneumonia. There was a smart rise of temperature for a week, then sudden crisis, the thermometer registering sub-normal for 24 hours. A rapid rise to former high level then occurred, more lung became involved, the apex gradually clearing. The temperature declined slowly, and for weeks was normal in the morning, rising to from 101° to 102° F. at night. Excepting over the apex, the lung was quite dull; no fluid was found on exploration. Resonance slowly returned; the affected side, which had become somewhat contracted, gradually expanded, and eventually the lung quite cleared up. There was a peculiar eversion of the lower ribs in this case, caused no doubt by the long period of diaphragmatic respiration and absent intercostal respiration. As the child voluntarily expanded his chest several times a day the deformity disappeared. In connection with this I might quote some remarks by Dr. Hughlings Jackson:—"In pneumonia during the ordinary breathing of the patient the respiration is carried on entirely by the diaphragm, the intercostal muscles not

acting at all, but if the patient be told to draw his breath they acted perfectly." The symptoms of pneumonia are so well known that it would be useless to refer to them here at any length. I have known the lung to clear up without any expectoration in an adult, although there was dulness and bronchial breathing. Here crisis occurred early, the patient going to bed immediately after the rigor, and treatment was begun within a few hours.

The nervous symptoms are sometimes very severe. In one of my cases, a man aged 35 years, attacked with apical pneumonia, presented all the symptoms of delirium tremens. He was not a drunkard, although he drank beer, but not to any abnormal extent.

Sleeplessness, too, causes one much anxiety in some cases.

The prognosis of the disease is on the whole good, excepting in cases where the patient is debilitated by age or bad habits. Children in uncomplicated cases nearly always recover. I think that in very young children empyema is an extremely serious complication.

TREATMENT.

Shattuck says that for therapeutic purposes cases of pneumonia may be divided into three classes:—

1. First in frequency are those cases which will recover under any treatment, or no treatment, unless they are grossly mismanaged.
2. Those which will die in spite of any and all treatment known at present.
3. Those in which judicious treatment will turn the scale.

Our object is constantly to enlarge the third class at the expense of the second.

Of course the first thing to do is to husband the patient's strength. Rest in bed is absolutely necessary. Attention to general matters, such as food and bowels, is to be enjoined, the diet being naturally as light as possible, and also as nutritious and supporting as is compatible with digestion. It is rational to collect all sputa in suitable receptacles, and to disinfect and destroy them. The patient, too, should be isolated.

The room selected should contain a fireplace and window, the latter of which should be kept open, a plentiful supply of fresh air being most necessary for the patient. With regard to medicine, in ordinary cases a mixture containing acetate of ammonia and sp. æther. nitrosi, with perhaps a little tr. camp. co., is all that is needed. If pain is great a few leeches will give rapid relief. Sometimes, when there is

much pain and restlessness, an injection of morphia is very beneficial.

I wish here to enter a protest against the application of poultices in the treatment of this disease. They are clumsy, cumbrous things; they require to be constantly renewed, thereby disturbing and exhausting the patient and making him uncomfortable. Among poor people they are generally cold within an hour of their application. I cannot see that they fulfil any useful purpose, and patients who know them are thankful to hear that their application is unnecessary. I have long since discarded them. Dr. Wilks, in the *British Medical Journal* in 1891, drew attention to the great value of opium in pneumonia—a disease in which it has been commonly said to be contra-indicated, the only definite contra-indication being shallow, laboured respiration, drowsiness, and a tendency to cyanosis. It is advisable to give a dose of $\frac{1}{4}$ to $\frac{1}{2}$ gr. of morphia by hypodermic injection, and repeat if necessary. If there be much insomnia, morphia may be used for this. I have found a draught containing bromide, morphia, and hyoscyamus very useful for inducing sleep. Sometimes, however, the patient cannot or will not swallow, or, when he does swallow, the drug does not seem to have any action. Then hypodermic injection is of great use.

In a case of apical pneumonia in a man of 35, with symptoms of delirium tremens, and a temperature of 105° F., where medicine was absolutely refused, where constant watching was required to keep him in bed, where there was insomnia and marked influence on the nervous system from the want of sleep and severity of the disease, I injected $\frac{1}{4}$ gr. of morphia and $\frac{1}{10}$ gr. of strychnine sulphate three times in twelve hours, with a most satisfactory result.

Strychnine has been highly spoken of by many writers in the treatment of pneumonia. The indications for its use are mainly derived from the pulse. If the tension begins to sink, or if the frequency of the beats be much increased, strychnine should at once be tried. If the respiratory movements also become less vigorous an additional reason is afforded for the use of the drug. ("Practitioner," Sept., 1894.)

In 1886, Dr. Herbert Habershon, in "St. Bartholomew's Hospital Reports," narrated a series of cases of cardiac failure treated by strychnine administered hypodermically, $\frac{1}{10}$ gr., in tabloid form, being dissolved in four or five minims of water, and injected either subcutaneously or into the gluteal muscles. Among these cases were two of double pneumonia. Dr.

Habershon expressed the opinion that the efficacy of strychnine is due to its action being excited in the excito motor nerve apparatus of the heart and on the respiratory centre. For, as he points out, strychnine often succeeds where other remedies, like ether and alcohol, have failed, the effect of these being largely directed to the muscular fibres of the heart, and to the arterioles. If we hold that in pneumonia what we have to fear is the influence of toxins on the nervous system, this action of strychnine brings indirect support to the view, the cardiac failure being really only an expression of exhaustion of the nerve centres, and is therefore an indirect effect of the poison. ("Practitioner" *loc. cit.*).

For the purpose of combating the depression of the circulation, and also to produce sleep, large doses Liebreich's chloral, dissolved in large quantities of infusion of digitalis, have been recommended. I have no experience of this treatment. Digitalis, theoretically, ought to support the heart, but it has failed. I have had no result in some cases. Perhaps it should be used hypodermically and in large doses.

Lauder Brunton says that the failure of digitalis to act on the heart in cases of pneumonia may be due to a paralysing effect of the high temperature in the disease on the roots of the vagi. May not this paralysing effect be produced by the pneumo-toxin circulating in the blood?

I have had no experience of alarming hyperpyrexia in pneumonia. The temperature has been in my experience kept within bounds by tepid sponging and quinine.

I can only mention the use of oxygen; I have not seen it used. Ice is highly recommended. I have not tried it. I believe it has been used in the Adelaide Hospital.

There are numerous other drugs recommended. I have not tried them. The ideal treatment is injection of the proper anti-pneumotoxin. What has been done in this direction will be found in the "Year Book of Treatment" for 1895.

I have not mentioned the use of alcohol. This, of course, must be used. Often it seems to have no effect, and what I have said above of strychnine and digitalis might explain this.

In concluding, I might remark that this paper is written with the hope of provoking a discussion on the treatment and ætiology of this important disease. I might have mentioned before that, as diseased meat is a possible factor in causation of this and other diseases, a proper supervision should be had over all slaughter-houses. Specially trained men should be appointed, and no carcasses should be permitted

to be used for food unless passed as perfectly healthy.

NOTES ON PNEUMONIA.

W. T. HAYWARD, L.R.C.P.I., &c., PHYSICIAN TO THE ADELAIDE HOSPITAL, LECTURER ON CLINICAL MEDICINE, ADELAIDE UNIVERSITY.

In a paper initiatory to a discussion on a given subject an exhaustive dissertation is not required. I shall, therefore, in the following remarks confine myself to points on which I think there is room for a considerable diversity of opinion, and thus thereby, I trust, pave the way for a discussion that I hope will be of benefit to all of us.

It is necessary that we should thoroughly understand exactly what we intend to discuss. Pneumonia is such a large subject, and presents so many varieties, that I think it wise to define as nearly as I can the particular form to which my remarks apply. In the first place I wish to eliminate pyæmic pneumonia; the pneumonia so often present secondary to disease of the heart, kidneys, typhoid, and the exanthemata; also that complicating phthisis. I purposely do not exclude that form so often accompanying influenza. That which I wish to speak upon is the acute inflammation of the lungs, termed by German pathologists "acute croupous pneumonia."

In the early days of my professional life, following the teaching of the time, I looked upon pneumonia purely as a local inflammation of the lung. More extended observation led me to regard it as a specific fever with a local manifestation. Recent studies in the causation of diseases has caused me to adopt a different attitude. I now believe pneumonia to be a local disease of microbic origin, giving rise to a definite toxæmia—in fact, a disease analogous to diphtheria—than which no disease has been better worked out. We may state fairly confidently that it is caused by the lodgment on suitable soil of a definite microbe, which causes a local membranous exudation, at the same time setting free a toxin which, being absorbed, gives rise to general constitutional symptoms, and often ulterior results. What are the points that favour this hypothesis? The onset of the disease is similar to that in diseases of known microbic origin. It runs a very definite course. The severity of the constitutional symptoms is not dependent upon the amount of local disturbance. Often when these symptoms are most intense it is impossible to locate the seat of the trouble. Again, after the crisis has passed, the patient feels comparatively well; physical

examination shows that the greater part of one lung is useless for respiratory purposes. The pathological condition of the lung, the inflammation being exudative, not interstitial. Lastly, the presence of a definite bacillus, the pneumococcus of Frenkel. I am aware that many authorities do not consider this point at all conclusive; at the last meeting of the British Medical Association so eminent a physician as Douglas Powell arguing against it on the ground that the bacillus has been found in various diseased conditions, and even in healthy saliva; but I would point out that the same may be said with regard to the bacillus of diphtheria, and may not its occasional presence in situations other than the lung account for the complications, such as meningitis, that occasionally occur?

In eliminating the forms of pneumonia secondary to other diseases, I excluded that occurring subsequent to influenza. My reason for so doing is that I am inclined to think that the pneumonia we then have to deal with is probably the same disease that we are now considering, modified by the primary complaint. Since the advent of influenza pneumonia has become much more prevalent than it was formerly. The symptoms, signs, and course are almost indistinguishable from the pure variety—that is if, in considering the case, we bear in mind that the initial disease is still running its course. I look upon the broncho-pneumonic surface as similar to a gelatine plate affording a congenial pabulum for any stray pneumococcus. An argument which I think favours this view is the frequency with which we meet with multiple patches.

This hypothesis will, I think, serve to explain in a measure the occasional occurrence of what is termed epidemic pneumonia, though most of the cases of pneumonia that come under our notice are isolated ones; still, I am sure, all of us have come across groups that present the appearance of having been caused by infection. The most marked example that I have come across occurred a few years ago, when I had six cases, all members of one family, in my wards at the same time; but though they were all undoubtedly suffering from pneumonia the course the disease ran was atypical, but this may easily be explained if my idea be correct.

I would like to utter a protest against the commonly-accepted notion that pneumonia is caused by "catching cold." I look upon it as utterly unscientific, unsupported by any valid evidence. An argument adduced in its favour is that the disease is more prevalent in cold and wet weather. It

seems to me that it would be just as reasonable to ascribe typhoid to getting hot, because it is most prevalent in the summer months! Surely it is more easily explained on the assumption that these seasons are most conducive to the development of the respective micro-organisms; different seeds have their particular seasons for germination, why not different micro-organisms?

From the consideration of the etiology I pass direct to the question of treatment. Years ago pneumonia was made the battle-ground of controversy by the supporters of venesection and their opponents; since that time, pretty nearly every method of treatment has been recommended, at one time or another, with the not unnatural result that apparently we of the present day are no better equipped for the conflict than were our predecessors. It is positively amusing to read in the medical annals the number and variety of drugs that are recommended by different men in the course of a single year. Holding the views I have expressed as to the nature of pneumonia, I cordially agree with Dr. Washburn, who says that until the *materies morbi* or the pneumo-toxin can be attacked treatment must be merely palliative. I think it is highly probable that before long the serum treatment will have been sufficiently elaborated to warrant an extended trial, though the published results so far are not over encouraging. Meanwhile I fear we must be content to grope along, attacking symptoms when they appear to be getting out of hand. An ordinary case should only be treated on general principles, no special medication being required. My experience of the apyretic treatment, either by continued administration of antipyrin or of large doses of quinine, is that the duration of the disease is prolonged, though I must admit that I have noted beneficial effects produced by antipyrin and salicylate of soda, when administered at the very commencement of the complaint, caused possibly by their influence on the pneumo-toxin before it has had time to thoroughly impregnate the system; at a later date they do no good. Venesection I can conceive as being of possible service in some severe cases, not owing to the relief that it may afford to the overworked right-heart—for the amount of mechanical obstruction is probably very slight—but by removing from the system a certain amount of the accumulated toxin. In cases when pain is a prominent symptom, one is sorely tempted to resort to morphia, but in two or three cases when I have done so the uncomfortable feeling that, though I have eased the pain, I have jeopardised the life

of the patient, has caused me to be very chary in its use. The violent delirium so often present, accompanied by absolute insomnia, are symptoms that necessitate attention. My practice is to order frequent cold sponging, and, if this is ineffective, I give chloral in frequently repeated doses. If the dose be too small the trouble is increased rather than abated.

I suppose in no disease has the necessity for free stimulation been more enjoined than in pneumonia. I therefore feel considerable reluctance in expressing the opinion that, in the large majority of cases, the administration of brandy, in the large doses usually prescribed, is not only not beneficial, but actually harmful. If the action of brandy was simply that of a pure stimulant I should not object to its use in many cases, but when we consider its secondary sedative properties, and its effect in checking elimination of morbid products, I think we should pause before resorting to it in the wholesale manner that is the custom. I believe that in strychnine we possess a drug that has all the advantages of alcohol, with none of its deleterious properties. With regard to local treatment, I consider that both hot poultices and cold compresses tend to relieve patients. Personally, I usually employ the latter, and, as a general rule, am satisfied with the results. To sum up my views as to treatment: If I do not see the patient in the absolutely initial stage of the disease, my efforts are directed to seeing that the excretive functions of the body are acting properly, and that the digestive organs are not called upon to do more than they are capable of, firstly, by attending to the bowels; by causing the skin to act by some mild diaphoretic, such as liq. ammon. acet.; relieving the thirst; aiding the kidneys, by allowing the patient to drink as much water as he pleases, in reason; secondly, by limiting his diet to milk, water, or milk and soda-water, whichever he prefers. If delirium and insomnia are present I rely on cold sponging and chloral. If the heart shows signs of failing, I rely on strychnine.

Dr. A. A. HAMILTON remarked: In my practice I find that deaths from acute pneumonia (primary) constitute about 4 per cent. of the total number of deaths from all causes. Of 25 deaths, 14 were adults, 10 children, and in one case the age is not recorded. Twelve of the 14 adults died on or before the 10th day. The two exceptions were both women. The one, Mrs. A. P., *æt.* 35, exhausted by child-bearing, destitution, and semi-starvation, struggled on till the 14th day. The other, Mrs. E. H., *æt.* 25, was attacked a few weeks after childbirth. Acute pulmonary tuberculosis supervened, and she died sixty days after the onset of the pneumonia. In Mrs. L., *æt.* 55, I noted total absence of expectoration during the whole course of a sharp attack,

from which she made a good recovery. In children the absence of cough is frequent and lack of sputum usual. In a series of 44 cases occurring in one year I had 8 deaths, or 18·18 per cent.; 14 adult cases with 4 deaths, 28·5 per cent.; 30 children with 4 deaths, 13·3 per cent. I have been surprised to find how well elderly people often recover from pneumonia. This was forcibly impressed on me by three cases, occurring within a very short time, all between 65 and 70, who all made good recoveries. As to the causation of the disease, I do not think that we have as yet sufficient evidence to absolutely decide the question. In view of many cases which give a history of definite exposure to cold, and others in which pneumonia follows injury, I hardly think we are yet justified in laying all the blame on the pneumococcus. Some years ago I had 12 cases, which occurred in six households, two members of each family being affected, and in every case in consecutive months.

My Hospital cases for the last twelve months comprise 12—6 males and 6 females; 5 died, 3 males and 2 females, 41·6 per cent. Among those who recovered were women aged 60 and 56, and a man aged 69. Treatment: I use hot poultices for the relief of pain and the comfort of the patient. It has been objected that poultices are heavy and damp. In cases of basal pneumonia, which are the most frequent, the patient lies on the poultice, not the poultice on the patient, and we find by practical experience that moist heat often relieves more than dry applications.

In the early days of my practice carbonate and iodide of ammonium, followed by the syrup of the iodide of iron, figured largely. Later on I used salicylate of soda, quinine, digitalis, and strychnine. Chloral in infusion of digitalis is most useful in delirium and insomnia. Opium and morphia I use in small doses to ease pain and soothe cough. Alcohol I give freely in the later stages, if I think it necessary. I can look back on some cases which I feel convinced owed their recovery to the freest possible stimulation. I have used ice-bags kept constantly applied to the affected part in three cases. Two of these died, aged respectively 39 and 27. Cold compresses, as I have generally seen them applied, act really as warm poultices, being put on under oiled silk, and left *in situ* for some time.

Empyema has not, in my experience, been a fatal complication. I have had very few cases, but they have all made perfect recoveries after incision and drainage, without any permanent deformity.

I have to thank Dr. Cudmore, my house physician, for looking up my Hospital cases.

Dr. SWIFT could not agree with Dr. Hayward when he said the pneumonia occurring during an attack of influenza was ordinary croupous pneumonia. In his opinion it was of a different character altogether. In the majority of cases he had seen the symptoms were less acute than in lobar pneumonia, the consolidation was not so deep, so that the breathing was not so tubular in character, and the dullness was less pronounced. But there were generally from the commencement moist crepitations. In fact, the condition appeared to be one rather of oedema, or so-called congestion, rather than consolidation. The symptoms cleared up very slowly, resolution being delayed for some weeks, in one case for three months. In regard to isolation, he did not consider it was necessary; for when we remembered the thousands of cases of pneumonia that were treated in hospital and also in private, with perfect immunity to immediate attendants, it was impossible to agree that pneumonia was infectious. No doubt several cases occasionally did occur in the same neighbourhood, or even in the

same house, but he would look upon these as rather of an endemic character. He could not agree with Dr. A. A. Hamilton that empyema was not a serious complication of pneumonia. In his experience, at home and also out here, empyema was always a serious complication, and frequently fatal. With regard to treatment, he was an advocate for the use of ordinary linseed poultices. He had been treated for an attack of pneumonia with an effervescing mixture of quinine, which Dr. Gault advocated, and poultices. He looked forward to the time for the administration of the medicine with loathing, but to the changing of the poultices with pleasure. Theoretically, I suppose, poultices ought to be applied along the spine, as Dr. Cleland suggests, to affect favourably inflammation of the lungs; but who has not seen or felt the soothing effects of a poultice applied to the abdomen for abdominal pains. I know it is the fashion of the day to discard poultices altogether as being clumsy and septic, and in the Adelaide Hospital Dr. Perks has almost banished them. In private practice I had, till quite recently, used an antiseptic lotion as a foment in the place of linseed poultices, but about three months ago I had a carbuncle on the back of my neck, to which I applied antiseptic fomenta, but after a few days I resorted to the old-fashioned poultice. I consider there is no comparison between the soft, smooth, and soothing linseed poultice and the wool or lint soaked in lotion, which has a tendency to get into lumps and hard. Why should not linseed poultices be made with an antiseptic lotion? I am decidedly in favour of the administration of alcohol in severe cases, but not indiscriminately, and always have in my mind an old nurse of great experience, in St. George's Hospital, who, if she had a bad case of pneumonia, would invariably ask for "a little more brandy." I would like to ask Dr. Corbin if he has been in the habit of bleeding. I remember seeing great benefit derived from bleeding one or two very congested patients.

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL DEFENCE ASSOCIATION OF VICTORIA.—COUNCIL MEETING, SEPTEMBER 30TH.

PRESENT—Drs. Hamilton (in the chair), Brett, Howard, Jamieson, McAdam, Mullen, and Goodall (hon. sec.).

BUSINESS.

Re orders of burial by J.P.'s without inquest or medical certificate of cause of death, Hon. Sec. was instructed to write to Secretary of Crown Law Department in reference to ruling in the matter.

Re Certification of Insanity.—Council decided to print and forward to members of the Association forms of indemnity, to be signed by responsible representative of insane person, protecting certifying medical man in case of legal action.

Re Medical Officers and Benefit Societies.—Draft form of agreement to be prepared and forwarded to members.

Re Unregistered Houses for Treatment of Women's Diseases.—Referred to Indecent Advertisement Committee for action.

Re Indecent Advertisements.—Report of Sub-committee received.

Re Reports to Police without Fee.—Members to be advised on this matter in annual report, January, 1896.

NEW MEMBER.

Dr. A. F. Davenport elected.

MEDICAL SOCIETY OF QUEENSLAND.

THE 105th General Meeting was held on September 10th, 1895, in the Society's rooms. Present:—Dr. Hill (President), Drs. Wheeler, Gibson, Orr, Love, Little, Fullerton, Ashworth, and Turner. Visitor: Dr. Sheaf.

Dr. LOVE showed a case of early progressive muscular atrophy. The deltoid, inner condyle muscles, and interossei of the right arm were much wasted. The hand showed an incipient form of the deformity known as "main en griffe." The patient was a stoutly-built, muscular woman, aged 26, otherwise in good health. There were no pains along the nerves, but fibrillar twitchings in the affected muscles sometimes caused discomfort. The electrical excitability of the affected muscles appeared to be increased.

Dr. WHEELER had seen a case of cervical pachymeningitis with similar wasting, but accompanied by sensory symptoms.

Dr. TURNER read notes "On Green Pus," and on "A Case of Empyema due to *Bacillus Coli*."

ON GREEN PUS.

BY A. JEFFERIS TURNER, M.D. LOND.,
BRISBANE.

I VENTURE to bring the following notes before you, thinking them to be of more than purely technical interest. The case I wish to refer to is one of extensive burns.

Eliza J., aged three years, was severely burnt on May 2nd. More than half the skin of the left arm sloughed off, together with a round area some seven inches in diameter on the left side of the chest. On admission, and for two or three weeks afterwards, there were no signs of severe collapse, and the temperature remained normal. The child proved intolerant of boric ointment, which whenever applied caused the appearance of a scarlatiniform rash on the trunk, and zinc ointment was substituted. Her general condition continued good until May 21st, when the temperature began to rise to 101° or 102° daily, the pulse became very weak, and there was occasional vomiting. In short, her state was a very grave one, though no cause could be discovered on examination, except that the burns showed no signs of healing, and discharged a profuse purulent secretion. On May 30th the temperature returned to normal, and she began very gradually to improve, though the discharge continued profuse for several weeks.

Being informed by the hospital sister that the purulent discharge had a distinctly greenish tinge, I saw it myself on June 15th, and found that it was so. The colouration, however, was not so noticeable but that it might have been easily overlooked. On the same date I prepared gelatine plate cultures of the pus in three dilutions. In these plates there was a rapid

development of rapidly liquefying colonies tinged with a greenish fluorescence. On examination, in a hanging drop these colonies were found to be due to a small, slender, very actively motile bacillus. Inoculated on agar, this gave rise to a slimy, colourless growth, while the whole jelly became of a most vivid green. After several weeks this green colour slowly faded. A secondary culture on agar gave rise to a very slight degree of green fluorescence only. Cultures in gelatine rapidly liquefied, the liquid portion being slightly tinged with a green fluorescence, and developed a membranous scum on the surface. In the original gelatine plates the growth of this bacillus was so rapid that it appeared to be a pure culture, and the first two plates were completely liquefied before colonies of staphylococci appeared in the third plate.

The preceding characters agree with those of *Bacillus pyocyaneus*, well known to cause a greenish colouration in pus. Green or blue pus used to be very common in hospitals in the pre-antiseptic days, and no doubt spread from case to case in epidemic fashion. Nowadays it is less common, but still liable to occur in discharging wounds in which for any reason it is not possible to keep up antiseptic precautions.

It is an interesting question whether the occurrence of this bacillus was the cause of the very serious symptoms from which the patient at one time suffered. Although I should not like to base a positive conclusion on a single case, there is much to be said in favour of this. *Bacillus pyocyaneus* is well-known to be pathogenic to small mammals, and to produce in its cultures a specific toxin. A large burn which has not yet developed into a healthy granulating surface is peculiarly fitted to absorb toxic substances. Furthermore, the onset of the grave symptoms several weeks after the initial injury might readily be explained in this way. It is true that the bacillus was not discovered until two weeks after the grave symptoms had begun to subside; but I cannot regard this as a very serious objection. There is no reason to suppose that this was the date of its first appearance, but rather the contrary. And the subsidence of the symptoms, in spite of the continued presence of the bacillus, admits of easy explanation. In the first place, it is possible that, by the prolonged action of the toxin, the system may have acquired a degree of immunity; in the second place, the growth of granulation tissue would certainly have rendered the injured surface less liable to absorption. I think that this case should at least keep us on the look-out for other instances

in which the bacillus pyocyaneus may appear to play an important role in human pathology.

A CASE OF EMPYEMA DUE TO BACILLUS COLI.

There are many micro-organisms which commonly cause suppuration. This holds good of empyema as well as of other abscesses. From two cases of empyema which I have had an opportunity of examining lately, I obtained pure cultures of diplococcus pneumoniae. This organism is the most frequent cause of suppuration in the pleura which usually follows pulmonary inflammation. The other pus cocci are, however, by no means infrequently concerned in the process. In the case I bring before you, however, another organism, known to inhabit the normal bowel, appeared to be the causative agent. The clinical history of the case was anomalous, and not like that of any other case of empyema that I have seen.

William O'D., aged 6 years, was supposed by his parents to have received some abdominal injury on the morning of July 4th, but no exact account of this could be obtained. However, later in the day, while in the company of his mother, he was suddenly taken with violent pain in the abdomen, which made him scream, and was followed by repeated vomiting. There was no stoppage of the bowels. On July 6th, when he came under observation, the abdomen was considerably distended, and resonant; no local tenderness or tumour could be made out by palpation. On the next day the abdominal distension had increased; the tongue was dry and brown, expression anxious, and pulse very frequent, small, weak, and compressible. The temperature remained normal. Nothing further could be discovered by local examination, but in view of the sudden onset, and the very grave condition of the boy, an exploratory abdominal incision was very seriously considered. The parents were, however, strongly opposed to this. No operative treatment was therefore attempted, and to our surprise no further development of the serious symptoms occurred. On the 10th there was distinct improvement in the general condition, but deficiency of resonance was noted over the base of the right lung. This showed no signs of clearing up, and on the 26th about an ounce of thick pus was withdrawn by the aspirator. He was then apparently convalescent, and improvement continued for some time, but the dullness never cleared up from the right base. A second aspiration removed scarcely any pus, apparently because it was too thick to flow. Yet the constitutional symptoms caused by the empyema were so slight, and its extent so limited, that it was not until August 23rd that a piece of rib was resected and a drainage tube

inserted. Since that date the boy has done well.

From the pus removed at the first aspiration a tube of glycerine agar was inoculated. In the incubator there rapidly developed large spreading colonies of a whitish colour, and slimy, semi-liquid consistence. There appeared to be only one species of bacterium in the culture, but to make sure of this a gelatine plate cultivation was made. In this there appeared a number of circular, whitish colonies, which, in the substance of the jelly, never exceeded the size of a small pin's head. But where they reached the surface they spread rapidly, first in a thin, then in a thicker layer. The jelly was never liquefied. There was only one species of bacterium present. On potato this grew in a whitish film. A stab culture in gelatine gave a characteristic appearance. There was a scanty growth all along the track of the needle, while, on the point of entrance, growth was vigorous, and a film was formed covering the whole surface. In bouillon a general turbidity was rapidly developed. The organism was a stout bacillus, varying from a short oval to a rod of considerable length, but the great majority were short ovals. Some of these, examined in the hanging drop, showed sluggish movements (not simply Brownian movement).

It would have been possible to subject this organism to further tests, and if it had been obtained from any extraneous source these would have been necessary. But, under the circumstances, there is no reasonable doubt that we have been dealing with the *Bacillus Coli Communis*, well known to occur abundantly in the contents of the normal intestine. This organism has been frequently found to be the exciter of suppuration—of purulent peritonitis, for example—also of suppuration of the urinary tract. But it is, I believe, rarely found in empyema, and I have not come across a reference to its occurrence in this situation. The clinical history of the case pointed as clearly as possible to some abdominal lesion—perhaps some localised peritonitis. But the case was certainly an obscure one, and the recognition of the presence of an empyema did not make it any clearer. However, the presence of this organism in the pus confirmed strongly the clinical evidence, and supported the inference that we were dealing with a suppuration secondary to some intestinal lesion. In what way this came about I do not propose to discuss, as the present case does not throw any light on that question. But the whole observation is interesting as illustrating how a bacteriological

examination may throw light upon an obscure clinical problem.

Dr. LOVE described an operation of rib-resection for empyema, under infiltration anaesthesia. The patient was a male adult, alcoholic, and a bad subject for chloroform. No pain was complained of except during division of the bone.

EASTERN SUBURBS MEDICAL ASSOCIATION.

THE Annual meeting of the Association was held at Aaron's Exchange Hotel on Friday, 4th October. The following were present:—Dr. Barkas (in the chair), Drs. Mullins, Collins, J. A. Dick, Matheson, Schrader, Fieldstad, Franklin, Tidswell, Knagge, Grafton Smith, Hughes, Quaife, Gordon McLeod, Phillip and Goode.

The HON. SECRETARY (Dr. J. A. Dick) read the annual report, which showed that five general and ten committee meetings had been held. There were sixteen members and sixty-six hon. members. The following papers had been read at meetings of the Association:—"Soil as a Factor of Disease in the Eastern Suburbs," by Dr. T. M. Kendall; "The Epidemic Diseases and their Prevention in the Eastern Suburbs," by Dr. Mullins; "The Present Sanitary Condition of the Eastern Suburbs," by Dr. Quaife.

The financial statement was read by the Hon. Treasurer (Dr. Collins), and showed a credit balance of £23s. 4d.

The report and balance-sheet were adopted.

Rule 18 was altered to read as follows:—"That the subscription to the Association be 10s. per annum."

The following gentlemen were elected office-bearers for the year:—President, Dr. G. L. Mullins; Vice-President, Dr. J. A. Dick; Members of Council (3), Drs. Hankins, Collins, W. J. Barkas; Honorary Treasurer, Dr. F. H. Quaife; Honorary Secretary, Dr. L. E. F. Neill; Auditors (2), Drs. C. A. Edwards and Matheson.

Dr. BARKAS read the following address:—

"Gentlemen,—In the course of the past year, during which I have been President, sundry changes have been made in the constitution of our Association, which I consider, and no doubt all of you will coincide with me that the alterations were for the better, though they are, perhaps, somewhat revolutionary compared with our former rules and bye-laws.

The main points discussed at the general meeting called for the purpose were the bye-laws relating to clubs or lodges. These had been found to be quite unworkable, and consequently such meeting decided to rescind these bye-laws *in toto*. In some respects I consider the necessity to abolish these bye-laws somewhat unfortunate, as it showed too plainly that there was no possibility of forming a medical code for the regulation of charges for attendance on club members, and indirectly it made very palpable that, so far as clubs were concerned, it was a case of every man for himself and devil take the hindmost. It is also unfortunate, as it creates a precedent for other associations to follow our example, thus allowing the clubs to become ostensibly masters of the situation, and enabling them to make contracts with medical men that are lowering in the extreme to a profession that ought to be kept up to a fairly high standard. The

misfortune, I consider, is just as great for the general public as for the profession, for the lower the contracts for medical attendance on club patients become, the less probability is there of the members being properly attended to. In times as pressing as these, it is not every man that can work for love of his profession alone, or, if he do so, he merely accepts such contracts as a stepping-stone to something better in the future. But, looking at these alterations from a point of view other than ethical, they are decidedly advantageous, as, now that this bone of contention is removed, there is more likelihood of bringing together the medical men who reside within the area of the Association in a social way, and enabling them to discuss matters pertaining to the boroughs in which they practise. So far as our association is concerned, I am convinced that these alterations have acted beneficially, and I also feel convinced that if the medical men residing in these suburbs who have not already joined us knew distinctly the sociality of our meetings, the nature of the topics discussed, and the total abolition of the so-called club bye-laws, there would be very few of them unconnected with us.

"Another great alteration was made, viz., the subscription was lowered from £1 ls. per annum to 5s. This necessarily limited our funds, and, after discussion by our Council, it was resolved to hire a room in the Paddington Town Hall (which was obtainable at a very small sum) in which to hold meetings for the discussion of topics of local interest in a social manner. It was also agreed that the subjects introduced should clash as little as possible with those of the British Medical Association; and further, that our meetings should be monthly when the British Medical Association was not in session. To these meetings our hon. members were invited, and also the Mayors of Paddington, Woollahra, Waverley, and Randwick, and other gentlemen intimately connected with sanitary measures. At the first meeting, held on December 14th, 1894, Dr. Quaife opened a discussion "On the Sanitary Condition of the Eastern Suburbs." Mr. T. Magney (Mayor of Woollahra) and Mr. J. M. Smail (Engineer to the Water and Sewerage Board) were present. An animated discussion followed Dr. Quaife's remarks, in which Messrs. Smail, Magney, Drs. Goode, Kendall, Hodgson, Collins, Parker, and Mullins took part. The next meeting was held on January 25th, when Dr. Mullins read a paper on "The Epidemic Diseases and their Prevention in the Eastern Suburbs." Drs. Ashburton Thompson, Clubbe, Tidswell, Kendall, Quaife and Edwards entered into the discussion that followed. The third meeting took place on March 1st, and Dr. Kendall opened the discussion with a paper, illustrated by diagrams, "On Soil as a Factor of Disease in the Eastern Suburbs." Drs. Huxtable, Tidswell and Quaife made some remarks on this subject, to which Dr. Kendall replied. Personally, I consider that these discussions opened up new ground to many of us, and gave us plenty of material for thought. Here I think I may safely tender, in the name of our Association, our thanks to those gentlemen who assisted us in these discussions. And I think I may also express the sorrow of our Association in having lost our late friend and hon. member, Dr. Huxtable. We will undoubtedly miss his presence at our future meetings.

"Among other matters that were undertaken by our Association was the formation of a sub-committee to draw up a pharmacopoeial report, as requested by the Pharmacopoeal Board in England, on all matters referring to the materia medica of this and other colonies, with special attention to the therapeutic action of

the different drugs, their method of manufacture, dosage, and nomenclature. The report of the sub-committee was submitted to a meeting of the Association, and then was forwarded by our Secretary to the Board in England. A letter of acknowledgment was received in due course, expressing thanks for said report.

"The utility of our Association is also brought into greater evidence by the power we have as a combined body of drawing attention to failures in sanitation or causes of local epidemics that are removable. During 1894 a sub-committee was arranged to confer with the Waverley Council concerning some very defective drainage in that suburb, the result of the conference being that the Council of the borough, without hesitation, took immediate steps for the removal of the faulty drainage. This case alone shows the benefit that should accrue from the alteration of our Rules, and points out a great scope to this and other Associations for further action in cases of epidemics, &c., arising in the future.

While referring to epidemics, I wish to draw attention to one point in which the members of our Association have shewn a certain degree of negligence. I refer to their abstention from filling up the forms for notifying diseases that had been carefully drafted by our worthy hon. secretary, Dr. Dick, and forwarded by him to each member and hon. member, with the request that at the end of each month such form should be filled up to shew the number of cases of diseases occurring in the Eastern Suburbs attended by such member, and then forwarded to the Hon. Secretary for future reference. There can be no possible doubt that if every member of our profession in these and other suburbs duly filled in these forms, the information thus gained would be of valuable assistance to the Government Statistician and to the Board of Health. But until compulsory notification is effected by legislation, it is certain that all voluntary attempts at notification will result in failure.

I have now to tender my thanks for all past kindnesses and thoughtful over-looking of any deficiencies as President during the past year, and have much pleasure in vacating the chair to my successor, Dr. Mullins, who, I am sure, will, during his presidency, do all in his power to raise the status of the Eastern Suburbs Medical Association."

Dr. MULLINS thanked the members for having elected him President, and said that he would do the best he could to follow in the footsteps of the retiring President (Dr. Barkas), who had done so much to promote the general interests of the Association.

Dr. MATHESON proposed, and Dr. FIELDSTAD seconded, a vote of thanks to the retiring office-bearers.

Dr. TIDSWELL supported the resolution, which was carried.

After the annual meeting a Smoke Concert was held. Messrs. Nathan, Absell, H. Weir, Truman, Cummings, Wedderburn, Harry Shine, Dr. Hankins, and Master Philip took part. Mr. H. E. Wilkinson gave a very interesting exhibition of "thought-reading."

On the proposal of Dr. MULLINS, a vote of thanks was accorded to the gentlemen who had so kindly assisted at the entertainment.

NOTICES.

All communications intended for publication may be addressed "The Editor, Australasian Medical Gazette, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

The Australasian Medical Gazette and the British Medical Journal are supplied to all Financial Members of the New South Wales, South Australian, and Victorian Branches Free of Cost.

Subscriptions (£2 2s. per annum) should be forwarded to the respective Branch Treasurers as below—

New South Wales, Dr. Crago, 34 College Street Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, OCTOBER 20, 1895.

EDITORIALS.

PROPOSED REGISTRATION OF MIDWIVES IN NEW SOUTH WALES.

A BILL "to promote the better training of women as midwifery nurses, and for their registration as such," was introduced in the Legislative Assembly of New South Wales by Dr. Graham on September 11.

Such a measure has been strongly advocated for some years past by a section of the profession in England, on the ground that the lives of lying-in women would be protected to a greater extent than at present, while it has been energetically opposed by others as creating an inferior order of medical practitioners. We do not propose to discuss the principles involved, as most of our readers are already conversant with the opinions of leading practitioners in England, as expressed in their communications to the *British Medical Journal*, but we may briefly review the proposed local measure.

The Bill provides for the examination and registration by the Board of Health of women who desire to act as midwifery nurses. From and after twelve months from the date of the establishment of the midwives' register, no woman shall be entitled to recover any fee or charge in any court, for attendance or service rendered as a midwife, unless such woman be

registered under the Act. Any woman who, at the passing of the Act, has been in actual practice in New South Wales as a midwife for not less than one year may be registered, if she obtain a "certificate of midwifery" from some hospital, dispensary, or Obstetrical Society approved by the Board of Health, or if she produce evidence from two legally qualified medical practitioners registered in New South Wales that she is a person of good character and qualified to act as a midwife. The Board of Health may frame rules (subject to the approval of the Governor in Council) regulating the method and subjects of the qualifying examination, and the general standard to be attained by persons passing the examinations, with a view to secure the possession of adequate knowledge and skill in midwifery by all persons who pass such examinations. To all the foregoing provisions little exception can be taken, provided the principle of the Bill be approved.

Section 2 of the proposed Bill defines a midwifery nurse to mean "a woman who undertakes to attend in cases of natural labour." It does not, however, define "natural labour," and this omission, we think, vitiates the whole Bill. Power and Sedgwick (New Sydenham Society's Lexicon) define natural labour as "a labour which occurs at the end of the ninth month of pregnancy, the pains being regular and effective, the process not continuing beyond twenty-four hours, rarely more than twelve, and very generally not above six, the size of the head and the capacity of the pelvis being duly proportioned, and no morbid state supervening either to prevent delivery or endanger the mother's life." If this be accepted as the legal definition of the term, there can be no possible need for the Bill, as many competent midwives would find their occupation gone, for not one labour in twenty is "natural" in this sense. If midwives must be licensed at all, they must be empowered to attend all cases of midwifery, whether natural or unnatural. If they cannot be educated up to such a point, they should remain unregistered and unqualified.

We may here refer to an extraordinary remark made by Dr. Graham, at a meeting held a few weeks ago to advocate the claims of a certain private dispensary in Sydney. Dr. Graham is reported to have said, in referring to the establishment, that "a number of young women had been scientifically trained in the practice of midwifery. They had been taken through a careful course of obstetrics, and, as a result, a professor at the University had declared that some of these young women had a wider knowledge of their particular work than many

medical men." We trust Dr. Graham has been misreported, but if not, we hope he will take an early opportunity of explaining the apparent slight cast upon the members of our profession by himself and this University professor, whose capabilities and capacity for forming a judgment in such matters he has not disclosed.

THE ADELAIDE HOSPITAL.

THE embroglio at this institution appears to be at an end, but the termination of it can scarcely be considered satisfactory. In our Editorial last month* we fully described the circumstances which had given rise to it, and at the time of writing we were led to hope that a compromise would be arrived at between the Board of Management and the Government. Unfortunately this has not proved to be the case. The Minister wrote to the Board a final letter, which can only be described as most insulting and discourteous, intimating that Nurse Graham would for the present be otherwise provided for, but that when the present Board of Management went out of office she would be restored to her position in the Hospital by the successors of the present Board, whose tenure of office it was not intended to interfere with, as it would naturally expire in the course of about six months. We congratulate the Hospital upon the prospect of being ruled by a Board who will sink its own individual judgment and implicitly obey the behests of the autocratic Minister. It will naturally be asked—Why does the present Board of Management remain in office, when, in spite of the reiterated assurances of Ministerial confidence, and the complete vindication of its past acts by the Royal Commission, its recommendations upon a small matter of administration and internal discipline are thus persistently rejected by the Government? The chief reason appears to be that the resignation of the Board would probably involve the resignation of the whole of the Honorary Staff, and would lead, naturally, to complete disorganisation of the flourishing Medical School. The most serious outcome of the whole business is the resignation of the Medical Superintendent, Dr. Perks. But we are not surprised at his action when we consider the amount of abuse which has been so freely and so undeservedly heaped upon him. One significant result is already announced, and that is a great falling-off in subscriptions this year.

*By some mistake, the original proof was substituted for the revised proof, hence one or two ludicrous errors appeared, such as "humorous" for "numerous," and "playing to the good" for "playing to the gods." Vide page 381.

LEPROSY CERTIFICATION IN QUEENSLAND.

THE speech of Dr. Lyons, of Brisbane, at the August meeting of the Queensland Branch of the B.M.A., opens up a rather novel feature in the administration of the Leprosy Act in the Northern Colony. It appears that a supposed leper named Molloy was sent from the country to Brisbane for examination. He had previously been examined by two medical men, who certified that he was suffering from leprosy. On his arrival in Brisbane he was examined by Drs. Wray, O'Doherty, Hirschfield, and Lyons, who, after a careful clinical examination, pronounced him to be a leper. Their opinion was confirmed by a bacteriological examination of the serum expressed from a tubercle on the thigh. Molloy was therefore sent to the leper lazaret at Dunwich. It appears, however, that the Government, or at least one of its Ministers, released the man from the lazaret owing to a report from Mr. Pound, the Bacteriologist, that an examination of the serum from the patient gave a negative result.

We are not now concerned with the inquiry whether leprosy is a contagious disease, but with the narrower question—does absence of the bacillus indicate an absence of leprosy? We medical men know perfectly well that, while the demonstration of the bacillus of leprosy is a confirmatory sign of the presence of the disease, its absence has no clinical significance whatever. But Dr. Lyons' main grievance is, that while two qualified medical practitioners in Rockhampton and four more in Brisbane, having taken into consideration all the signs and symptoms exhibited by the patient, had expressed their unqualified opinion that he was suffering from the disease, yet the man was removed from the leper lazaret on the unsupported opinion of a layman. As well might a patient be declared free from scarlet fever or kidney disease on the report of an analytical chemist that the sick person's urine contained no albumen. Mr. Pound is undoubtedly a capable bacteriologist, and he may have honestly believed that the patient was free from leprosy, but we hold that in this case the patient's release was not justified, in the absence of a skilled medical examination. We do not know of any disease in which a bacteriological examination of the discharges is absolutely certain to show the presence of the characteristic bacillus. If this be the case, then, how can the absence of bacilli, taken alone, prove freedom from any particular disease?

If the Leprosy Act is to be carried out in this manner it had better be repealed at once.

LETTERS TO THE EDITOR.

CHOLESTERIN IN THE CORNEA.

(To the Editor of the Australasian Medical Gazette.)

DEAR SIR,—This rare condition has been noted on one or two occasions, but the question has in each case arisen as to whether the cholesterol was actually in the stroma of the cornea or deposited on Descemet's membrane.

A case is recorded by Mr. Simeon Snell in the "Transactions of the Ophthalmological Society of the United Kingdom," vol. vi, pp. 338-340, in which, besides noting cholesterol in other parts of the eye, he states that there were some particles in the cornea.

Mr. Gustavus Hartridge also showed a case at the Ophthalmological Society in the early part of this year which he described as cholesterol in the cornea, but subsequently was disposed to regard the crystals as being in the anterior chamber; so that, without a positive microscopical examination, in Dr. Pockley's case the exact locale of the crystals would be a matter of doubt, although the superficial examination of the case at the meeting led me to agree with him in thinking that the cholesterol was in the stroma of the cornea, but in the posterior layers.

The eye was a likely one for the formation of cholesterol in the sub-retinal fluid, and the crystals might have found their way through a rent in the detached retina, and so through the pupil, and become deposited on Descemet's membrane in that way.

I am indebted to my friend, Mr. E. Treacher Collins, late Pathologist at Moorfield Eye Hospital, London, for the information as to recorded cases.

Yours truly,

C. J. WEEKES.

30 College-street, Hyde Park, Sydney,
21st September, 1895.

ALLEGED DOG-EATERS IN SILESIA.

(To the Editor of the Australasian Medical Gazette.)

SIR,—The question whether Silesians habitually eat dog's flesh was discussed in these columns a short time ago, but not decided. Readers of the *Gazette* may perhaps be interested, therefore, in the following quotation. It has been taken from pages 526-7 of the English translation of that imposing work by Max Nordau, "Degeneration," where an incident in Herr Gerhart Hauptmann's play, "*Die Weber*," was described in the following words:—

"A poor weaver, who has not touched meat for two years, asks a comrade—not having the heart to do it himself—to kill a pretty little dog which has run up to him, and his wife roasts it for him. He cannot control his craving, and begins dipping into the saucepan almost before the meat is done. . . ." And the account was illustrated with an excerpt from the dialogue, to which was added the remark, "All this conversation is written in Silesian dialect."

Probably one party to the discussion will decline to see evidence in this; but the other may confidently accept it as decisive. It is true that "Degeneration" affords an example of the wall-eyed pedanticism whose increasing tyranny at once inspired M. Leon Daudet to write and justified him in publishing "*Les Morticoles*." Yet, although the pseudonymous author is phenomenally lacking in the sense of humour (many respectable English press-noticees to the contrary notwithstanding),

and although Herr Hauptmann is perhaps the only writer he mentions with praise, it is sufficiently clear that allusions to stewed dog in a pathetic play such as "*Die Weber*" would raise no laugh at Berlin provided the scene were laid in Silesia; and, consequently, that "dog" and "flesh-meat" are commonly known to be notions habitually associated in Silesian brains.

I am &c.,

J. ASHBURTON THOMPSON.

September 17th, 1895.

REVIEWS.

LEPROSY, IN ITS CLINICAL AND PATHOLOGICAL ASPECTS. By Dr. G. Armauer Hansen, Inspector-General of Leprosy in Norway, and Dr. Carl Looft, formerly Assistant Physician to the Lungegaards Hospital. Translated by Norman Walker, M.D., With numerous Photographs and Coloured Plates. Bristol: John Wright and Co., 1895.

So much attention has of late been directed to the subject of Leprosy that a work bearing the well-known name of Dr. Hansen on the title page is certain to contain much to interest those who make a study of this loathsome disease.

The authors do not approve of Daniellson and Boeck's Classification of "Nodular" and "Anæsthetic" Leprosy, and suggest the terms "L. Tuberosa" and "L. Maculo-anæsthetica." Each form is described at length. They hold that both forms may recover. In nodular cases this is a very rare exception, while it is the rule in the maculo-anæsthetic. In nodular cases recurrent outbreaks are almost invariable, and the patients rarely live more than eight or nine years after the definite outbreak of the disease, but they usually die from some intercurrent affection before the Leprosy has run its course.

Perhaps the most interesting chapter in the book—to Australian practitioners at any rate—is that on "Etiology." Drs. Hansen and Looft hold that leprosy is not hereditary, nor has it a miasmatic origin, but that it is entirely an infectious disease. Their arguments in support of this theory are not, to our mind, conclusive. They base their opinion on the fact that a bacillus lepræ has been demonstrated, and that since the opening of leper asylums and the isolation of patients suffering from the disease the number of cases has decreased in Norway from 2,833 under treatment in 1857 to 1,081 in 1890. But we know that the B. lepræ has never been cultivated, and even inoculation with leprosy tissue has failed to produce the disease in healthy persons, and we also know that some diseases have a tendency to die out even when no precautions with regard to isolation are taken. For instance, in New South Wales phthisis has decreased from 595 deaths per million inhabitants in 1857-59 to 733 in 1890-93. Diseases of the nervous system show a falling off from 2,498 to 1,323 per million within the same period. Dr. Hansen has for many years held the opinion that leprosy is contagious, but Hirsch pointed out the fallacies in his arguments. Since the publication of Hirsch's work, Father Damien died from leprosy in Molokai, and this event seems to have spurred on Drs. Hansen and Looft to reiterate their favourite theory. But Father Damien's disease is easily accounted for by the fact that leprosy was endemic where he laboured, and that he lived under the same conditions as those who contracted the disease in the ordinary way. We ask, if leprosy be contagious, why are there no authentic records of new leprosy areas being created, either endemically or epidemically, by

imported lepers? Why, for instance, was not the disease introduced by the leprosy Norwegians who emigrated to North America?

According to the authors, treatment is of no avail. Remedies which have been extolled by some observers have been condemned by others. A number of tables present statistics of the disease in Norway, and numerous photographs and chromo-lithographs enhance the value of this excellent work.

ANTI-TOXIC SERUM FOR THE CURE OF DIPHTHERIA. (Report by the Board of Health.)

Dr. Tidswell's appointment as Government Bacteriologist has borne good fruit already, and in his interesting report on anti-toxin he has given particulars of all the cases in which the serum was used in N.S.W. Dr. Tidswell shows that the anti-toxin causes a saving of about two hundred lives a year in the colony. He also points out that the serum imported from Europe suffers no deterioration on the voyage, and that it is a remedy which may be safely and beneficially used. Every medical practitioner should read the report, which may be obtained from the Government Printer, Sydney, for 1s. 3d.

LEPROSY IN NEW SOUTH WALES. (Report for 1894 on administration of the Leprosy Act). Appendix to Report. Clinical Notes on the Cases of Patients Admitted to the Lazaret during the year 1894. By Dr. J. Ashburton Thompson.

During the year 1894 five lepers were admitted to the leper lazaret at Little Bay. Of these one was a native of N.S.W., of European descent; one a native of Queensland, of European descent; one a native of Saxony, one of New Caledonia and one of India. The working expenses of the lazaret amounted to £2,794 5s. 2d., being equal to an average cost of £74 10s. 3d. per inmate per annum. Dr. Ashburton Thompson's clinical notes on the cases admitted during the year are very interesting.

COAST HOSPITAL, LITTLE BAY. (Report for 1894).

Professor Anderson Stuart's report on the working of this institution shows that 2,332 patients were treated during the year, with 94 deaths. The mortality rate from typhoid fever was 8.3 per cent., diphtheria 33.3 per cent., measles 14.2 per cent.

MAINTENANCE OF SICK PAUPERS. (Report on Vote for 1894).

In this report the Medical Adviser to the Government points out that, although the natives of the United Kingdom resident in N.S.W. number less than one-fourth of the total population, they contributed more than one-half of the applicants for hospital relief. Professor Stuart shows the necessity for special legislation on this subject.

VACCINATION. (Report for 1894).

THIS document shows that during the year 1894 there were 2,008 vaccinations performed in N.S.W., of which 1,957 were successful. Of the total number, 15 were performed in Sydney and 1,942 in the country. In 15 country districts only, out of 105 in which there are Government vaccinators, were cases reported. Is this the fault of the local Government vaccinators? If not, how is it that 746 successful cases are reported from Orange, 378 from Bingara, 196 from Nyngan, and over 100 each from Murrumburrah and Coonabarabran, while the largest towns, such as Newcastle, Bathurst, Goulburn, &c., show no returns?

NEW SOUTH WALES MEDICAL UNION.

A SPECIAL general meeting of the members of the Union was held on September 26. Dr. W. H. Coutie, one of the trustees, occupied the chair, and about 40 members were represented.

In the absence of Dr. W. H. Crago, through illness, Dr. G. Lane Mullins moved that an alteration be made in rule 9, whereby the fine for non-payment of the annual subscription would be done away with.

Dr. KNAGGS seconded the resolution, which was carried unanimously.

The Hon. Secretaries (Drs. Jarvie Hood and Mullins) reported that during the past half-year 49 new members had been elected. Two members (Drs. P. S. Kendall and L. B. Huxtable) have died, and there are now 164 financial members. No law cases have been before the Council for consideration during the half-year.

The Hon. Treasurer's report showed a credit balance to date of £368 19s.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during August to every 1,000 of the population was 2.73, and of deaths 1.19; 123 deaths, or about 25 per cent. of the total deaths, occurred in public institutions. The deaths of children under five years of age during the month were 136, or 27.09 per cent. of the total, 96 being under the age of one year. Ten deaths of child-bearing women took place during the month, or one death of a woman to every 116 births recorded.

Dr. C. AYRES has commenced practice in Oxford-street, Paddington (Sydney).

Dr. J. GRAHAM, M.L.A., of Sydney, has introduced a Bill to promote the better training of women as midwifery nurses, and for their registration as such.

Dr. F. HALL has been appointed hon. assistant physician to the Sydney Hospital.

Dr. GIULIO VANZETTI, M.D. Padua 1868, formerly of Albion Park, Nymagee, and Forbes, died at Florence, Italy, on the 6th August, aged 51 years.

Dr. BURGONYE has been appointed medical officer to the Helensburgh Coal Mine, in the place of Dr. Lovegrove, resigned.

Dr. C. HEDLEY has been appointed visiting surgeon to the Grafton gaol.

Dr. T. J. HENRY, of Warialda, on leaving the district, was presented by the residents with an illuminated address as a mark of their esteem and admiration for services rendered during the past seven years, both as a medical officer and private citizen.

Dr. W. F. LITCHFIELD, late of the Sick Children's Hospital, has commenced practice at 147 Elizabeth-street, Sydney.

Dr. J. N. E. MACLENNAN has returned to the colony by the s.s. "Fort Chalmers," which collided with a large iceberg in lat. 45° south, last August. Dr. MacleNNan has been absent from the colony for sixteen months, during which time he has been studying at the hospitals in London, Paris, and Dublin.

Dr. W. R. MATHEWS, late of Albury, has commenced practice at Milson's Point, North Sydney.

Dr. S. L. RICHARDSON has been appointed deputy licensing magistrate of the Licensing Court at Queanbeyan.

Dr. D. D. RUTLEDGE, of Waverley, has removed to corner of Liverpool and College streets, Sydney.

Dr. W. B. THROWER, formerly of Launceston, is now practising at Silverton.

NEW ZEALAND.

ARTHUR MEREDITH WHITEHEAD, M.B., Ch.M. Aberd. 1883, locum tenens for Dr. Collins, of Wellington, who is absent in England, died on August 30th from pneumonia, which supervened an attack of influenza, at the early age of 34. He formerly practised at Petone for about seven years.

Dr. PHILIP JAMES, of Wellington, has been appointed an honorary surgeon to the Wellington Hospital.

QUEENSLAND.

A SURGEON is required for the Isisford Hospital in Queensland; salary £275 p.a., private practice allowed. Applications, endorsed "Surgeon," must be in the hands of the Secretary (Mr. J. Turner) by the 24th November. Isisford is the centre of a pastoral district, 445 miles by rail and road from Rockhampton.

Dr. G. DAVIDSON, a native of the colony, has just returned from England, and commenced practice in Brisbane.

Dr. A. C. F. HALFORD, a son of Professor Halford, of the Melbourne University, has been appointed resident medical officer at the Brisbane General Hospital.

Dr. R. MCBURNEY, of Mackay, has been appointed a medical officer for the purposes of the Leprosy Act.

Dr. G. A. MACNUTT, late of Melbourne, has settled at Brisbane.

Dr. C. A. E. SHEAF, formerly of Toowoomba, has returned to the colony from his trip to England, after an absence of two years.

Dr. WYNNE, a recent arrival, has commenced practice at Mackay.

SOUTH AUSTRALIA.

Dr. A. E. J. RUSSELL has been appointed acting-medical superintendent of the Adelaide Hospital, until a permanent successor to Dr. Perks, who ceased his connection with the Hospital on October 1, has been appointed.

TASMANIA.

Dr. L. J. H. OLDMEADOW has settled at Melton Mowbray.

Dr. J. SERVICE, formerly of Newtown, near Sydney, has commenced practice at Westbury.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during August to every 1,000 of the population was equivalent to 30.34, and of deaths 16.58 p.a. Males contributed 54 per cent. and females 46 per cent. to the mortality of the month. Children under five years of age contributed 23 per cent. to that mortality, as against 30 per cent. in August, 1894. One hundred and fifty-one deaths, or 24 per cent. of the whole, took place in public institutions.

THE election for the appointment of medical officers to attend patients in the infirmary and midwifery departments of the Melbourne Women's Hospital, and also to attend out-patients in the same institution, was held on September 30th. The election takes place once in every four years, but on this occasion a new departure was made by providing a special medical staff for the treatment of out-patients. The voting was exceptionally heavy, no fewer than 1,200 persons out of a possible 1,400 going to the poll, Dr. Morton heading the poll with 870 votes. The following were the successful candidates:—*Infirmary Department*—Drs. O'Sullivan, G. R. Adam, Felix Meyer, and Hooper. *Midwifery Department*—Drs. Alan Mackay, Downie, Nyulasy, and Cuscadon. *Out-patients Department*—Drs. F. W. Morton, Horne, Anderson, and Fetherston. One of the surprises was the rejection of Dr. Rowan, who had long been connected with the institution.

MISS LILIAN ALEXANDER, M.B., has been appointed Assistant Resident Surgeon at the Midwifery Department of the Melbourne Women's Hospital; the other candidate was Mr. Forsyth, M.B.

DR. J. COANE, formerly of Brighton and Armadale, has settled at Yackandandah.

DR. R. H. GIBBS, late of Werracknabeal, has commenced practice at 24 Mathoura-road, Toorak.

DR. W. WARREN, of Collins-street, has been appointed Specialist for Diseases of the Nose, Ear, and Throat, and Dr. J. Alexander Scott Specialist for Diseases of the Eye at the Melbourne Homœopathic Hospital.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Clidening, Frederick Talbot Driffield, M.R.C.S. Eng. 1894, L.R.C.P. Lond. 1894.
Mugliston, Henry Boyes, L.R.C.P. Edin. 1870, L.R.C.S. Edin. 1870, M.R.C.S. Eng. 1871, L.S.A. Lond. 1870.
For additional registration—
Gillon, George Gore, F.R.C.S. Edin. 1895.

NEW ZEALAND.

Ramsay, John, M.B. 1893, Ch.B. 1894 Melb.
Simpson, Frederick Wright, M.D. Cooper Med. Coll., San Francisco, 1894.

QUEENSLAND.

Davidson, G., M.R.C.S.E., L.R.C.P. Lond.
Maonutt, George Augustus, M.D. Brux. 1885, M.R.C.S. Eng. 1881, L.R.C.P. Ed. 1883.
Laver, Charles William, L.R.C.P. of R.C.S. Ed., L.F.P.S. Glas. 1894.
Row, Linford Elfe, L.R.C.P. of R.C.S. Ed., L.F.P.S. Glas. 1889.

SOUTH AUSTRALIA.

Nicholls, John William, M.D., Ch.M. of L. Mid. Qu. Univ., Irel., 1873.
Souter, John Francis, M.B. of Ch.M. Aberdeen 1873.

TASMANIA.

Oldmeadow, Lloyd John Hollis, M.B., Ch.M. Edin. 1892.
Service, John, L.R.C.P. of R.C.S. Edin. 1878.

VICTORIA.

Kelly, Horace Grattan, L. et L. Mid. R.C.P. of R.C.S. Edin. 1895, L.F.P.S. Glas. 1895.
Additional qualifications registered—
Bett, James Wilson, M.D. Aberd. 1892.
Giles, Henry O'Halloran, M.B. of Ch.B. Adelaide, 1891.

MEDICAL APPOINTMENTS.

Campbell, Matthew, M.B., B.S. Univ. N.Z., to be a Public Vaccinator for the district of Patea, N.Z.
Fullerton, Robert John, L.R.C.P., to be Public Vaccinator for Coalville, Vic.
Gibbes, John Murray, M.D., to be Public Vaccinator at Serviceton, Vic.
Giles, Henry O'Halloran, M.R.C.S., to be Public Vaccinator at Werribee, Vic.
Hedley, Charles, M.B., Ch.B. Melb., to be Government Medical Officer and Vaccinator for the district of Grafton, N.S.W.
Magill, Martin, M.B., Ch.B. Melb., to be Government Medical Officer and Vaccinator for the district of Moree, N.S.W.
Moss, William Joseph Allens, M.B., to be Public Vaccinator at Kensington, Vic.
Naylor, Arthur George Byre, L.R.C.P., to be Public Vaccinator at Minyip, Vic.
Nicholls, John William, M.D., Ch.M. Qu. Univ., Irel., to be Public Vaccinator for Port Germein, S.A.
Read, George Frederick, L.R.C.P., to be Health Officer for New Norfolk, Tas.
Shanley, Thomas, L.R.C.P., to be Public Vaccinator at Heywood, Vic.
Wilmoth, Robert, F.R.C.S., to be Health Officer for New Norfolk, Tas.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

AITCHISON.—On the 13th September, at Albert Park, South Melbourne, the wife of Alex. S. Aitchison, M.B., Ch.B. Melb., of a son.
BROWN.—On the 7th September, at Colac, Vic., the wife of W. H. Brown, M.R.C.S., of a daughter.
EADIN.—on the 13th September, at Caulfield, the wife of Dr. James Eadie, jun., of Bendigo, Vic., of a daughter.
HINDER.—On the 26th September, at Ashfield, N.S.W., the wife of H. V. Oritchley Hinder, M.B., of a daughter.
KORTUM.—On the 28th September, at Cooktown (Q.), the wife of H. Kortum, M.D., of a daughter.
LOOSLI.—On the 9th September, at Camberwell, Vic., the wife of Dr. R. J. Loosli, of a daughter.

MARRIAGE.

FYFFE—SMITH.—On the 18th September, at Holy Trinity Church, East Melbourne, Edward Henry Fyffe, M.B., C.M., of Fitzroy, to Agnes Ethel, eldest daughter of J. H. Smith, late Chairman of Railways, S.A.

DEATH.

HINDER.—On the 28th September, at Ashfield, N.S.W., of acute nephritis, following influenza, Ethel Ernestine, wife of H. V. Oritchley Hinder, M.B., aged 27.

HUXTABLE MEMORIAL FUND.

SINCE last notice the following gentlemen have subscribed to the above:—H. Paterson, Esq., Drs. Hull, Cunningham, Machattie, S. H. Hughes, Chas. Maher, Pope, Hankins, Flynn, Russell, J. J. Power, B. Bowman, G. Hurst, A. A. Lendon, and B. B. Huxtable.
WM. H. ORAGO,
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AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

SOME REMARKS ON THE PRESCRIBING AND WEARING OF SPECTACLES, AND A DEMONSTRATION OF SOME MODERN OPHTHALMIC OPTICAL INSTRUMENTS AND APPLIANCES.

READ BEFORE THE N.S.W. BRANCH OF THE
BRITISH MEDICAL ASSOCIATION

BY F. ANTILL POCKLEY, HONORARY OPHTHALMIC SURGEON TO THE PRINCE ALFRED HOSPITAL, LECTURER ON OPHTHALMIC MEDICINE AND SURGERY IN THE UNIVERSITY OF SYDNEY.

MANY conditions call for the use of glasses. In addition to those cases of defective eyesight obviously due to faulty refraction or accommodation, there is the large class of cases where the patient is unconscious of any ocular defect, but where a slight or latent error of refraction or accommodation, or in the equilibrium of the external ocular muscles, gives rise to eyestrain and numerous associated troubles.

Headaches are well known to be frequently due to such ocular defects, and are often permanently cured by glasses after the pharmacopœia has been exhausted. In cases where they come on after prolonged use of the eyes, or close application to fine work, the connection is obvious; but in many cases they are not at first thought attributed by either doctor or patient to eyestrain. Such, for instance, are the headaches on first waking in the morning, and increasing during the day, so often present in muscular asthenopia, and the periodic headaches occurring at tolerably regular intervals, as also the persistent headache.

Livinge likens an attack of migraine to a nerve-storm gradually accumulated by a condition of unstable equilibrium, and gradually accumulating tension, in the parts of the nervous system immediately concerned, eyestrain being one of the exciting causes, and he theorises as to the way in which the attack is brought about. He supposes that the overtaxing of the ciliary or external ocular muscles, or both, induces an excessive supply of blood, leading to congestion, which passes to other parts of the eye, causing fatigue, aching, or actual pain. The intimate connection of the nerves supplying these parts with the fifth pair causes the morbid action to extend to these nerves, and so explains the frontal headache. Through the connection of the fifth with the sympathetic the morbid process travels to the meninges and cortex of the

brain, and the action will be helped by passive cerebral congestion due to stooping over the work, and by active hyperæmia caused by the special use of the brain at the time.

Different authorities estimate from 50 to 90 per cent. of all headaches as due to eyestrain. They may be frontal, temporal, vertical, occipital, and may even extend to the spine. They may be slight or of the greatest severity, and may be accompanied by diplopia, giddiness, or vomiting. They may even give rise to a strong suspicion of cerebral tumour. Such a case, with severe headache and vomiting, was recently sent to the Prince Alfred Hospital, from far in the country, as one of supposed cerebral tumour; but, on examining the eyes for the confirmatory sign of optic neuritis, nothing abnormal was found beyond hypermetropic astigmatism, and on correcting this both headache and vomiting disappeared. So-called climacteric headache is often due to the onset of presbyopia. Eyestrain is also an occasional cause of insomnia, and, on the other hand, of drowsiness.

Whilst refusing to admit that many cases of epilepsy, hystero-epilepsy, chorea, melancholia, and other nerve diseases are due to eyestrain, I should mention that there are not wanting oculists who assert that this is so, and report cases. In America the craze for tenotomising muscles for epilepsy is carried to an absurd and unjustifiable extent. I remember, however, one case of epileptiform seizures in a young man apparently cured by the wearing of prisms.

I should like to emphasize a very important, and perhaps not generally recognised practical point, viz., that whilst refractive errors of high degree produce the greatest defects in vision, it is more often the slight degrees that cause asthenopia, headache, and the associated troubles, and it is easy to understand why this should be. Persons with high degrees of ametropia, anisometropia, or heterophoria cannot get clear binocular vision with any effort, and, therefore, they do not attempt the impossible task. Where there exists a slight defect, however, there is a ceaseless struggle to overcome it, and it is this constant strain that causes the trouble. We do not strain our muscles in trying to lift a ton because, knowing it would be useless, we do not try; but who does not know the feeling of fatigue, aching, and actual pain produced by holding out the unweighted arm for any length of time? Is it surprising that the delicate ocular muscles are distressed by a slight abnormal strain going on incessantly under the demands of present-day work.

It is in slight degrees of anisometropia and astigmatism, especially if the different meridians be oblique, and, most of all, if they be different in the two eyes, that the strain is most distressing. By straining it may be possible to get fair binocular vision, at any rate for a time. Having a notion of what clear vision is, the mind appreciates it, and is not happy till it gets it, but, having got it, is soon again unhappy, because it cannot keep it, and because of the resulting headache.

I do not wish to burden these remarks with illustrations, but I may, perhaps, cite one case as a sample of many. An artist friend, aged 39, had suffered since early youth from what he called "bilious attacks," which periodically prostrated him, and completely incapacitated him for work. His method of "cure," after having vainly experimented with all sorts of liver medicines, was to abstain from food, and, though so blind with headache that he could scarcely see, walk for 20 miles, stagger home exhausted, and go to bed. After this he would be well for about a week or ten days, when he would have another attack, and so on from year's end to year's end. As a matter of fact, he was struggling against an astigmatism, about which he knew nothing, and which had not occurred to the minds of the various medical men he had from time to time consulted. I suggested to him one day that probably his eyes were at fault, but it was not until some months afterwards that he turned up in despair at my consulting rooms. Under homatropine, I found an astigmatism of 0.5 D. in one eye, and 0.75 D. in the other, with oblique axes, and prescribed proper glasses for constant wear. This was over two years ago. He has never had a bad attack since, though he works hard, often till the small hours of the morning, and his gratitude is unbounded. It is not every day that medicine yields results comparable to this, considering the simplicity of the remedy along with the magnitude of the benefit conferred. I might add that many things which had before puzzled him in drawing and perspective were now explained, and his work greatly improved.

Just as it is with slight refractive errors, so it is with slight muscular defects—a slight diplopia, for instance, which merely causes overlapping and confusion of the images. The mind instantly resents this, and an undue strain is thrown on the muscles to overcome it. If the images are widely separated, the false image falls on a peripheral and less sensitive part of the retina. The patient does not strain his muscles in the useless attempt at fusion, and, though there may be diplopia and giddiness for a time, he soon learns to suppress or disregard the false image. He loses binocular vision, but is spared the asthenopia.

To the foregoing proposition, that it is the slight errors that cause systemic disturbance, comes the corollary that all errors, if corrected at all, must be corrected thoroughly, having regard to the needs and peculiarities of each case.

It is the failure to do this in some instances that is the cause of symptoms of eyestrain where, perhaps, none had existed before, and explains in some cases why patients, though they have clearer vision with their glasses, will not wear them, but throw them aside. Say a patient comes with a high degree of astigmatism. He has never had distinct vision, and does not know what it means. Uncorrected, he cannot get it, and does not trouble with the attempt. Give him glasses which partly correct the error, leaving perhaps $\frac{1}{2}$ D. uncorrected or over-corrected, or the axes of the glasses a little out, and he immediately begins to experience discomfort from the strain of trying to overcome the slight remaining error.

Amongst local results of eyestrain, chronic conjunctivitis, and blepharitis, as is well known, are often kept up by uncorrected refractive errors, and do not yield to treatment till glasses are worn. Many cases of squint are due to the same cause, and these, if treated early, are often cured by glasses—a result always pleasing to both the surgeon and the friends.

* * *

For the proper prescribing of spectacles, a correct knowledge of the anatomy, physiology, and pathology of the eye, and of the principles of ophthalmic optics, is essential, as well as a recognition of the conditions that call for the use of glasses.

I am no advocate for what Landolt calls "optical polytherapy," or, as an American writer puts it, "glazing the whole human race in the interests of pseudo science." There are many inconveniences attached to their use. We should abstain, therefore, from giving glasses unless they are really needed; but whenever there exists a refractive or accommodative or muscular defect, *with symptoms attributable to that defect*, it is our duty to correct it, and to do so as thoroughly and conscientiously as we can. It will not do to slavishly follow rigid rules of thumb, for the procedure must be modified to meet individual cases. We have to ascertain, and bear in mind, not only the refraction of the eye, its powers of accommodation, and the state of equilibrium of the external ocular muscles, but also the visual acuity, the nature of the work for which the eye is to be adapted, and the circumstances and conditions under which that work has to be carried on, and also the glasses previously worn—if any. It sometimes becomes a question, as Landolt says,

not only of adapting the glass to the eye, but of adapting the eye to its correcting glass. We must also consider the patient's age and the state and tone of his general health, and in some cases his hereditary tendencies.

These points being admitted, which I take for granted, it is obvious that the class of men trading as ophthalmic opticians are quite incompetent to undertake the responsible work of prescribing glasses, for they know little of these things—merely enough to be dangerous. There is more in it than is dreamt of in their philosophy. Their crude methods aim only at one thing—to get the glass with which the patient thinks he sees best. I should have said *two* things—the other being that it is well to find astigmatism (which they often do when it does not exist), for the high price of cylindric lenses yields a larger profit. No single method of testing is reliable, least of all the subjective, without—as is almost invariably necessary with young persons, and in most cases of astigmatism and many of myopia—the use of a mydriatic, and without confirmation by the ophthalmoscope, retinoscopy, ophthalmometry, or some objective test.

Of course the laity will go to advertising opticians, as they do to advertising quacks. It will take a long time to educate them up to a better knowledge. I would, however, say a word against the not uncommon practice of medical men recommending their patients to these individuals. "You want glasses; just drop in to So-and-So, in George-street; they will fix you up!" It is often done, and I have known medical men go there themselves to get "fitted," and to send their wives and children. It is no doubt done thoughtlessly, just as in all probability was the case with the medical gentleman who took the chair at a lecture on the eye, with limelight accompaniments and musical interludes, given by one of the Sydney opticians, a few weeks ago. Ethically, it is wrong, just as much so as it would be for a surgeon to send a man to a druggist for a prescription for a cough, or for a physician to recommend a patient with a dislocation or a fracture to a bone-setter or a splint-maker. But, putting aside the ethical aspect of the matter, it is bad policy, inasmuch as it is against the patient's interest, and whatever is not to the patient's interest can only in the end, boomerang-like, strike back and hurt his adviser. The patient whose case has been improperly treated by an optician, and who has been put to discomfort in wearing, and unnecessary expense in buying, a worse than useless article, is not likely to thank the doctor who sent him there. In the large cities on the other side of the world

the best opticians refuse to test and prescribe, and so it should be. *Ne sutor ultra crepidam.*

Spasm of accommodation is a common condition, and one that troubleth not the optician. He frequently gives a hypermetropic or astigmatic patient, with simulated myopia, concave glasses, to the intense aggravation of his troubles, and, in the case of a myope with spasm, grave damage is done by giving too strong a glass. This iliac spasm is readily recognised by the aid of the ophthalmoscope or a mydriatic, which is more necessary in correcting myopia than hypermetropia, in respect to consequences which may follow over-correction.

Again, it is well-known that a child with a high degree of hypermetropia often holds his book very close to his eyes, simulating myopia. In fact, the parents invariably say they are short-sighted. These cases are not due to spasm, but to the fact that the hypermetropia is so great that no effort of the accommodation suffices for sustained clear vision, and the patient gives up the attempt to get it, compensating himself for the indistinctness by the greater size of the retinal image which he secures by holding his book closer. The size of the image increases in greater ratio than the circles of diffusion. Opticians sometimes mistake these cases, and give concave glasses. Only last week I had such a case.

Another point—in some cases almost as important as the proper selection of the glasses, but one frequently neglected—is the proper fitting of the frames. In the first place, it is all-important that the glasses should be properly centred, i.e., that they should be so placed that the visual line will pass through the optical centre of each glass. This may, for practical purposes, be considered the thickest part of a convex, and the thinnest part of a concave lens. It is not to be confounded with the geometrical centre, which is the central point of the surface area of the glass. The two do not necessarily coincide, and in cheap spectacles one often finds the optical centre quite eccentrically situated in relation to the geometrical. Simple inspection of the glasses on the face is not sufficient to test the accuracy of the centering. In practice the usual method is to ascertain and mark the optical centre of each glass, and then see that this, when the glass is *in situ*, is in line with the centre of the pupil. This plan is sufficient for practical purposes, though it is not absolutely exact, and, moreover, it is tedious and troublesome. Ward Holden reminds us (*Knapp's Archives*, vol. xx., p. 24) that centering for the pupils is of cosmetic interest only. (According to V. Reuss, the line of sight always passes to the outer side of the centre of the pupil.

What we really wish to ascertain is whether the glasses are so placed that the muscle-balance is preserved, and Holden suggests the alternate covering of either eye, with distant fixation for distance glasses, and fixation at reading distance for reading-glasses. If the muscle-balance be normal, and the covered eye show no deviation, then the glasses must be centred for the visual axes. If there exists an insufficiency of the interni or externi the eyes show no deviation only when the glasses are so placed that their prismatic equivalents correct the insufficiency. I find testing with the photometer far more convenient and quicker than Holden's method. It indicates at once, for either distance or reading-glasses, not only if there be any deviation caused by the glasses, but the exact prismatic equivalent of the deviation. Moreover, if we have purposely ordered a decentering or displacing of the lenses to obtain a certain prismatic effect, we can tell at once whether the glasses as finished give the desired result, and, if not, to what extent they must be altered. I shall explain this presently when showing the photometer.

When the eyes converge on a near point, as in reading, the interpupillary distance is about 3 mm. less than when the eyes are adjusted for distance. When the same pair of glasses is worn for distant and near vision the inter-central distance has to be a compromise between that proper for each. Badly centred glasses, by introducing a prismatic effect, often give rise to diplopia, apparent false position of objects, giddiness, asthenopia, with neuralgic pains, and tendency to squint. Sometimes we find the face not symmetrical, one pupil being nearer the bridge of the nose than the other. The frames must be constructed to meet such a case. A medical friend of mine was conscious that there was something wrong with the glasses he wore for his astigmatism, which had been prescribed for him by an eminent oculist in England, who had probably not examined them to see if the optician had fitted the frames properly. I could get no improvement with any other glasses, but noticed there was marked asymmetry of the face, and on having the frame altered on one side the discomfort disappeared. There are cases where, along with a refractive or accommodative error, there exists a relative weakness of the internal or external recti muscles. Here the glasses may sometimes very properly be intentionally displaced or decentered towards or away from the nose, so as to add a prismatic effect.

A convex glass decentered inwards, so that the visual line passes through some point in its outer half, will have the additional effect of a prism with its base towards the nose (*i.e.*, an adducting prism). If decentered or displaced outwards, the

effect will be that of a prism with its base towards the temple (or abducting prism). The effect of decentering a concave glass inwards or outwards has in each case the reverse effect to that produced by the convex glass. The extent of the displacement necessary to obtain a required prismatic effect varies with the strength of the spherical lens employed, and can be readily calculated for each individual case. The stronger the glass the less the displacement required. The easiest formula is that given by Ward Holden. He finds that a displacement of 8.7 mm. in a lens of 1 dioptre has the effect of a prism of 1°. Therefore, he multiplies 8.7 mm. by the number of the prism whose effect is required, and divides the product by the number of the lens in dioptres. Thus, the effect of a prism 4° in a lens of 7 dioptres is obtained by decentering that lens to the extent of $\frac{8.7 \times 4}{7} = 5$ mm.

The term "displacing" is understood to mean narrowing or widening the distance between the two lenses, the glass and the wires being shifted closer together or further apart. By "decentering" we mean shifting the glass in its frame, so that the optical centre comes to lie nearer one or other edge of the frame. In some cases one plan, in some the other, is adopted, in some a combination of both methods. Displacing has the effect of limiting the field of binocular vision. Decentering has the objection of increasing the weight of the glasses. Generally we displace the glass, as far as is possible, without interfering with the field, and, if sufficient effect is still lacking, the remainder is made up by decentering in addition. Decentering is possible only within certain limits, and is dependent on the size of the glass. Seven different sized glasses are recognised in the trade, numbered from 00 (the largest) measuring 41 x 32 mm. to No. 5 (the smallest) measuring 32 x 23 mm. A "No. 1 eye" will allow only 2 mm. of lateral decentering, a No. 2 "eye" 3 mm., No. 3 eye 4 mm., and so on.

When a greater lateral effect than this is required, the optician takes a prism of the required strength, and grinds the spherical curve on its two surfaces.

With weak glasses a trifling error in centering is generally of little consequence, but in delicate or neurasthenic patients, where the muscular equilibrium is, as it were, just on the balance, even a weak glass badly centred may cause trouble. In glasses of 3 or 4 D., or upwards, proper centering is always of importance. The prismatic effect of strong glasses is so great that a hypermetrope of 10 D. could never have binocular single vision unless the glasses were decentered or combined with prisms.

Considerable discomfort and inability to read for long are often caused in simple presbyopia, by wearing convex glasses whose centres are too far apart (as they often are when handed on from husband to wife). This adds the effect of a converging prism, and throws an undue strain on the internal recti. Rather should presbyopes' glasses be decentred or displaced inwards, so as to relieve convergence along with accommodation.

It is also a mistake to give presbyopes too strong glasses. This necessitates their holding the print too close to the eyes; and, again, the internal recti have too much work thrown upon them.

Concave glasses, if set too close together, increase the convergent effort, which is not only fatiguing, but, in addition, it stimulates excessively the associated act of accommodation, and these two together have an aggravating tendency on the myopia. Concave glasses should rather be decentred outwards, so that the effort of convergence may be diminished. But this procedure must be adopted with extreme caution, and, in any case, is only to be adopted for near work. If used for distance, a divergent squint might be developed. Ready-made spectacles for myopic children are often too wide, and tend to produce a divergent squint.

Proper vertical centering is also of importance. With distance glasses, the centres should be on the same level as the pupila. Glasses for reading require the centres to be 3 or 4 m.m. lower. Reading glasses should also be inclined downwards, and their outer edges forwards, so that the line of sight may traverse them perpendicularly to their surfaces. If not so tilted, and the line of sight traverses the glasses obliquely, the effect of a cylinder is superadded. When strong convex lenses, e.g., cataract glasses, are worn for reading, without being tilted, a strong cylindrical effect is added, which may or may not be an advantage.

Myopes often have a trick of directing their line of sight obliquely to right or left, which has the same effect as adding a cylinder with axis vertical. By so doing they themselves correct a slight existing astigmatism (of which the vertical meridian is generally the most strongly refractive). Mauthner states that myopes do this, not merely to correct an astigmatism, but simply to increase, in at least one meridian, the insufficient strength of their glasses. They voluntarily produce an astigmatism, preferring diffusion lines to diffusion circles, and it is an astigmatism which is aggravated by the fact that every movement of the head or eyes causes its amount to vary. When a myope is found habitually looking obliquely through his glasses it is nearly always a

sign that there is uncorrected astigmatism or else that the glasses are too weak. For this, and for another reason, it is important to thoroughly correct myopic astigmatism; the other reason being that uncorrected astigmatism is a potent factor in increasing the myopia.

I should like to say a few words on the vexed question of the correction of myopia, about which there is such difference of opinion amongst ophthalmologists. Should we aim at giving full correction for near as well as for distant vision, following what may be called the modern German school, as exemplified by Förster, or should we follow the teaching of Landolt and most English writers? Landolt emphatically lays it down that "*a myope must be prohibited from wearing a concave glass for any distance at which he can see clearly without accommodation*," and if a glass be required for work to give a weaker one than that required for distance. Whilst eminent ophthalmologists differ, I can only, with great diffidence, express my own opinions, and all the more so because the time-limit will not permit of my giving the arguments which have influenced me, a disciple of Landolt, in inclining (as a result of my small experience and reading and reasoning), to the German system. I hope to go fully into this very important question on some future occasion, merely stating now that I think it is best to correct myopia when it exists, and to correct it fully, and let the patient wear the same glasses constantly, *except in the following conditions* :—

- (1.) Where there are signs of active disease or congestion of the ocular tissues.
- (2.) Where acuteness of vision is poor.
- (3.) Where the accommodation is weak.
- (4.) Where presbyopia exists.
- (5.) In cases of middle-aged or old myopes, who prefer the blurred images they have been accustomed to; and lastly, where binocular fusion has been given up in the interest of clearer monocular vision.

Returning for a moment to the fitting of spectacles. The effect of glasses varies, according to the distance at which they are placed in front of the eyes. The proper place is at the anterior focus, 13 mm. from the cornea, or as near that as the eyelashes will allow. The effect of convex glasses is increased by removing them further from the eye, provided the distance of the object looked at be more than twice the focal distance of the lens. (Landolt.) The effect of concave glasses is increased the nearer they are brought to the eyes. One practical bearing of this is that when a myope is tested subjectively with glasses placed in a trial frame too far in front of his eyes, and similar glasses are fixed in a spectacle frame

closer to the eyes, they have a stronger effect, which, in cases of high myopia, is a serious error.

A new form of bifocal glass has been recently introduced in America. It is called the "cemented bifocal." A small lens for reading is cemented on to the lower part of the distance glass. This gives a much larger field for distance than in the old Franklin glasses, which has the division horizontally across the centre of the frame, whilst giving sufficient field for reading. It also minimises the confusion caused by the division in certain positions of the head which is so objectionable in the Franklin glasses, and makes a lighter and more elegant glass. I show you a pair made to my order by Mr. Wiesener, of George-street. It is a good sample of the kind of work that can be turned out in Sydney.

The importance of securing proper fitting of the glasses requires accurate measurements being taken, and given to the optician, if there be the slightest doubt of his competency, or wherever for any reason we require the lenses to be decentred or displaced. It is also advisable in many cases for the patient to bring the glasses for inspection, to make sure that the directions have been properly carried out. After having tried different mechanical contrivances and adjustable trial frames, I find that the easiest and most reliable way of getting the proper measurements is to have a few pairs of trial frames with different-sized lenses, on which are marked the height and width of bridge, the distance it is thrown forwards or back, the inter-central and inter-temporal distances, &c., and a suitable graduated rule, and I use a form such as this (shown) for giving the measurements.

When there exists extreme sensitiveness to light, or when the patient has to work under electric light, or the new patent incandescent gas-light (which appears to be very trying to sensitive retinæ), it is in some cases permissible to give light blue or smoke-tinted glasses, but these must be judiciously employed, or they may aggravate the hypersensitiveness of the retina. Ametropic children or growing persons should have their eyes examined periodically. Not only does hypermetropia tend to decrease, and even to turn to myopia, whilst myopia tends to increase with age, necessitating alteration in the strength of the glasses, but also the growth and alteration in the shape of the face requires fresh adjustments of the frames.

Children especially, but adults also, are often very careless with their spectacles, and one sees the glasses so smeared that clear vision is impossible, and the frames so bent and twisted that the glasses stand at different distances

from the two eyes, or at different levels, and so sometimes introduce an apparent displacement of the object or troublesome diplopia.

The best material for spectacle frames is gold of from 10 to 14 carats. Finer than this, it is too soft; if more alloyed, it is apt to blacken the skin. Aluminium will make an excellent, light, strong frame, which will not rust, and will no doubt be largely used when a satisfactory method of soldering is discovered.

The "saddle" bridge is the best for all purposes.

Spectacle lenses are generally made of crown glass, sometimes of rock crystal (so-called "pebbles"). The latter are harder and less liable to become scratched, and are also a trifle lighter, and are said to be cooler to wear; but unless they are very accurately ground in the axis of the crystal they refract irregularly, and cause distortion of the images. On the whole, crown glass is the better material.

Pince-nez or folders are not so comfortable or theoretically so good as spectacles, but they are certainly more elegant and more convenient for carrying in the pocket, and can be more quickly put on and taken off, and they may be worn in some cases. For astigmatism the horizontal pince-nez, which keeps the axis of the cylinders in their proper direction, is sometimes satisfactory.

MORBID ALVINE SECRETIONS.

BY WALTER SPENCER, M.D., OF ENMORE,
SYDNEY.

My subject is intimately related to certain pathological processes which accompany dysentery, to which I must briefly advert, and I take the opportunity to dwell upon certain points of treatment, with the view of eliciting instructive comment.

I became acquainted with that disease on my first trip to the Spanish Indies, where the royal red and yellow of Castille was pointed out to me as the dysentery flag, an opprobrious epithet bequeathed from the long wars upon the Spanish main where our seamen most suffered from its ravages.

The term "Dysentery" conveys no pathological information, although we associate it with abnormal alvine dejecta, with tormina and tenesmus. Its symptomatic pain may be referred to almost any or every part of the abdomen, irrespective of its lesions. We are indebted to pathology for the differentiation of its morbid conditions and are led to realise the

oft-repeated observation, that every pathological question contains the germs of new ones more complex still.

Vitiation of the portal circulation, nervous influences or local irritants which lead up to inflammation of the solitary glands of the large intestine, not infrequently occur. Infected water will cause an epidemic, such as that among four hundred passengers bound to Hobart on board the s.s. "Gulf of Mexico," in 1885, after leaving the Cape.

Residents here are fortunately not liable to acute attacks in a severe form. Treatment by ipeca has been our sheet-anchor until the recommendation of Dr. Avetoom, an officer stationed in Baluchistan, revived the ancient Persian remedy—simple cinnamon powder in doses of one drachm, twice a day—which proves more rapid and efficacious.

The chronic form which may ensue from neglect, on relapse from an acute attack, or as a complication of malarial poisoning, expresses a continuous ulceration of the mucous lining of the intestine. Besides the blood and jelly which characterise early stages of the process, the dejecta now contain pus and sloughs, which will continue to appear until congestion has been relieved and ulceration arrested in favour of granulation and cicatrisation. The nature of the sloughs will vary according to the extent and depth of the lesions, whether the result of slow molecular disintegration or of more rapid action into the deeper tissues. The part played in these morbid processes by the *amœba coli* is, I believe, undetermined. As to whether any variety of the disease, except the tubercular, is due to any micro-organism, is a matter of doubt. Tubercular ulceration presents similar symptoms, but usually defies all treatment. I have seen at a necropsy caseated mesenteric glands as large as filberts, where the bowel instead of being soft and pliable, felt like thin rough leather.

Primary tubercular ulceration of the intestine is fortunately rare. I once placed a labourer in the country hospital to which I was consulting surgeon, whose disease progressed in spite of treatment until a diagnosis of primary tubercular ulceration was arrived at. He then received daily rectal injections of sulphuretted hydrogen suspended in carbon-dioxide, through Bergéon's apparatus. As in every tubercular disease for which I tried this promising remedy, all the symptoms were promptly alleviated, and the patient died in the faith that he was getting well.

In the numerous cases of ulceration which supervene upon recovery from enteric fever, the

lesions are usually localised in the upper part of the rectum, or at the lower end of the sigmoid flexure.

In these cases it is futile to rely upon remedies given through the mouth. They are only useful as following general indications. Topical applications by enemata are necessary and, in cases where repair is possible, reliable.

The following is an illustration:—E. W. M., aged 41, came to me in January last, pale, flabby, and haggard. Following an attack of enteric fever, he had suffered for nearly five years from occasional retching, with violent tormina and tenesmus. These had become at length so severe as to prevent sleep and unfit him for any occupation. He could walk upright with difficulty, and seemed a most miserable object. He passed frequent stools loaded with blood-clot, jelly, and occasionally shreds. His pains were epigastric, umbilical, and lumbar, also radiating from the pubes as though up the ureters, but were most on the left side. Tenderness on pressure was elicited in the umbilical and in both inguinal regions. Tongue clean and shining with red tip; pulse 64, full and compressible; temperature, urine and heart normal; no hæmorrhoids nor anal fissure.

For four years he had been treated with alternations of ipeca, belladonna, opiates, acids, carminatives, calomel, terebinth, lactopeptin, bismuth, antipyrin, catechu, quinin, nux vomica, alkalis, salicylates, hamamelis, and sedative suppositories. He protested that, with the exception of the last, they had all made him worse, and passionately expressed desire for death rather than for continuance of his sufferings.

Absolute recumbence, fluid food, and nitrate of silver injections gave in a few days relief from the tormina and tenesmus, and caused tenderness to be limited to the left iliac fossa. He made a good recovery in two months.

I wash the bowel out with boric acid solution half an hour before the silver injection, which gives rise to acute pain and to subsequent dull aching. These, however, diminish in duration and intensity with each injection. Absolute recumbence with the use of the bed-pan, is essential so long as any pains are experienced. Washing out the bowel with cold water is found to be a grateful palliative.

Such an illness leaves sometimes an intermittent type of diarrhoea, for which I have employed cold enemata containing tincture of nux vomica, with benefit even to cases which had developed cicatricial contraction.

The cicatrices sometimes break down, with recurrence of the old symptoms. I have found them to respond to the old treatment if

recommenced at once, but have prohibited the patient resuming violent exercise, pick and spade or axe work for two years.

The mucous masses voided in inflammatory phases differ essentially from the membranous exfoliations, of which an account was given by Dr. Rhys Griffiths in the *B. M. J.*, June 16, 1894, and of which I obtained specimens in the case of a neurotic young lady who was under treatment for gastric ulcer. These were diaphanous and shaped like long crumpled leaves, showing traces of venation which increased the resemblance. They consisted of a structureless matrix bearing islets of cylindrical epithelium.

Mucous exudation, if voided in quantity, assumes the shape of casts more or less perfect, of the gut. The best specimens arise from cases where chronic atony of the intestine is complicated with some superadded inflammation, as in persons over middle age who have been accustomed to drug themselves with purgatives beyond their powers of elimination, and where cumulative action sets up chronic mischief. Some people take purgatives every night almost all their lives, to the great profit of Morrison, Holloway, Cockle, Beecham, *et hoc genus omne*.

The appearance of mucous casts is very frequently followed by another rare excretion, "sable intestinal," the reaction of the fæces is then never acid and if the casts be copious is strongly alkaline. As soon as the lesions begin to cicatrise, a course of dilute mineral acid, rendering the fæces acid, will stop both phenomena.

I have had one case of singular interest. Mrs. L., a lady past middle age, had a serious attack of acute pyelitis due, probably, to an impacted renal calculus which had been jolted during a long, rough journey. Hamaturia, pus, casts and albumen progressively diminished under treatment, without operative interference being called for. She was of earthy complexion, neurotic, subject to headaches since her youth, to frequent attacks of lassitude, nervous debility, cutaneous eruptions and neuralgia, as well as to obstinate constipation, for which ailments she had during twenty years absorbed a multitude of drugs, pharmacopœial, homeopathic and empirical. She was regarded as an exceptional being of such "constitutional delicacy" that her organs could not be expected to respond to any ordinary therapeutics.

The administration of an enema was strenuously opposed, on the dictum of a homeopathic adviser that some internal injury sustained during a confinement in early life rendered it a dangerous operation.

Examination revealed a ruptured perineum, rectum and vagina forming one cavity. A long, flexible nozzle to the syringe overcame the difficulty, and occasional enemata were agreed to on my accepting the responsibility of all disastrous consequences; when one day her husband came in great alarm, carrying a jar filled with what he called a large worm, supposed to be of unusual virulence.

This, on being emptied out and purified, proved to be a translucent cylinder of greyish mucus, somewhat damaged in transit, which had evidently cohered throughout its length, more than two metres. Its diameter was fairly uniform, about 1 cm. It was the most perfect specimen I have seen.

On section it showed a central spot, which marked a longitudinal perforation pervious to the point of a fine probe. Divining that I was on the track of "sable intestinal," I prescribed belladonna and nux vomica dosimetrically, with the result that in two days she passed a large quantity. This, when washed out, gave 20 grammes of greyish-brown, gravelly particles which ranged in their longest dimension from less than 1 to more than 5 mm.

Analysing some of them, I was surprised to find and to extract mercury in the metallic state.

Enquiry elicited from the patient that mucus had been previously expelled at intervals under the influence of cholagogues and salines, that she remembered having spongy gums, foul breath, buccal and nasal irritations, and finally, that every night for thirteen years she had swallowed five grains of blue pill. This habit she had left off for the past five years during which she had remained constant to homœopathy.

Subsequent specimens of her fæces showed that fats and oils were properly saponified, that ingestion of dilute mineral acids would arrest the abnormal secretions, some of which might be expected to reappear when the acid was left off. Here is a specimen half of the largest particle obtained.

Remembering and transposing one word in a line from *Faust*, "*Was man Weiss auf Schwarz besitzt kann man getrost nach Hause tragen*," I ran some of the microscopic globules into one, and flattening it under a cover-glass, obtained a metallic disc as large as four pins' heads. This I presented to my patient on her recovery, hoping that possession of a mine might balance her dissatisfaction with the enemata.

In this case the pancreatic and biliary secretions seemed unimpaired; there had been no complaint of diarrhoea, but, on the contrary,

of constipation. The length of the cast might have been increased by compression of the sphincters. These, however, had been out of action and the cast would appear, at least in part, to have passed through a patent ileo-caecal valve, placing it out of the category of mere *mucous colitis*.

The sequence of events would seem to have been:—1, chronic constipation and abuse of purgatives leading to atony of the colon; 2, chronic mercurialism; 3, deposit of irritant solid particles in the mucous membrane of the bowel; 4, exudation of mucus into casts.

What were the catarrhal processes which caused the copious mucous exudation?

Prolonged abuse of purgatives coupled with retention of faecal masses, would set up patches of chronic congestion, and the complex analytic and catalytic processes carried on in the intestinal walls under the influence of the great nerve plexuses would become perverted. Accretion of numerous solid small irritants would, by increasing sub-mucous vascularity and intumescence, favour an exudative process. The lodgment of similar solid irritants I suspect of playing an important part in certain disorders of childhood. In all cases where mucous masses have been detected, and in which I have personally examined the dejecta or have enlisted honest and patient co-operation to do the same, I have obtained some intestinal sand. Here is a mixed gravelly specimen and one in much finer subdivision.

How is the intestinal gravel and sand formed? The particles are much too large to have been lodged in the follicles. I can conceive their being deposited in the angles on the posterior aspect of valvulae conniventes, where onward passage of faeces, bending the valves backwards, would protect and favour accretions. And I advance this hypothesis in the hope that proof positive of some other may be adduced. The sand was expelled in this case only after the casts had been removed. The tonic and peristaltic effects of strychnin and atropin caused it to be extruded in large quantity.

Cases have been reported where similar particles contained organic debris and lignified vegetable cells, which may have served as nuclei. These must have come with the chyme, been lodged in crypts and become encrusted with earthy salts that had either been ingested or chemically reconstituted in the lymph and blood-plasma. But this case supplied mercury, whose effects had been betrayed during the long history of anæmia, eruptions, neuralgias, etc., but which had not been ingested for five years. Had this mineral penetrated slowly through

long and tortuous microscopic channels from the stomach and duodenum into the storehouses where it received its calcareous incrustation? It would be interesting to know its chemical history ere it reached the wall of the intestine in a metallic state.

The case reminds us of that gruesome relic of the Peninsula war which hangs in the Museum at Madrid, the skeleton of a much-salivated French grenadier, beneath whose feet stands a vessel to hold the accumulating pool of mercury which the force of gravity has for years been draining through his bones.

Time does not permit me to touch upon the subject of larger enteroliths. I wish, however, to mention the case of a patient (Mrs. K.) who passed these two exceptionally large and knobby gall-stones, after two doses each of 8ozs. of olive oil, in August, 1893. Influenced by slighter subsequent attacks of colic she agreed to my operating upon the gall bladder, but on the recommendation of a friend, first went under a course of copious dosage with decoction of *Petroselinum sativum*, the common parsley-root. I believe this has some repute as a catamenial stimulant. She filled a large vessel with the roots, covered them with water, and let simmer for seven hours. Of this decoction she took half-a-pint after meals thrice daily during thirty days, twice daily for the following fourteen days, and then once daily for the same period. Under its influence she passed twenty-seven concretions (of which I now exhibit specimens). When recent they appeared thrice the present size, soft, friable and disclosing the presence of numerous vegetable fibres which permeated them. Her subicteric complexion is since completely cleared and she has enjoyed nine months of better health than before, without recurrence of the attacks of colic that had afflicted her for years.

The solvent action of olive oil on gall-stones is well known. Distension of the duodenum with a quantity of that fluid during dorsal decubitus must favour the flow of some of it up the ductus communis choledochus, thus facilitating the passage of impacted angular masses into the bowel.

Owing to a financial storm three years ago which I fear affected others of us, I had to sacrifice my laboratory with many of my books and instruments. Since my arrival here I have been the bond-servant of Clubs, with scant leisure for research. I now plead for pursuance of the unsavoury study of phenomena which are often overlooked and unrecorded, by those who can afford the time. We shall not be placed in the predicament which befell members of the

Royal Society in the early days of the last century, when it was a stock subject for unworthy jests. A traveller exhibited a root brought from Egypt, said to be a specific for dysentery. The specimens were handed round, picked, smelled and tasted. Whereupon he explained that the natives used them as suppositories. "Good God, Sir, do you mean to say they have had these in their entrails?" "As surely, gentlemen, as you have had them in your mouths."

The mediæval alchemist who distilled urine, in the hope of finding a precious metal, discovered phosphorus. Who can say, after fœces have been found to yield mercury, whether, in these days of gold cures, some lucky examiner may not discover gold.

ANTI-TOXIN IN DIPHTHERIA.

By C. L. HANDCOCK, M.B., GOULBURN, N.S.W.

ON September 6, 1895, I was sent for to see W. S., a girl aged 12. She had been ailing for a few days, complaining of headache and sore throat. Her mother had thought nothing of the sore throat until last night, when she noticed white spots on both tonsils. Her pulse was 144, temp. 100.2°; tongue coated. Both tonsils were covered with membrane, and there was a patch of membrane at the base of the uvula. The glands at the angles of the jaws were enlarged, and very painful; the breath was very fetid; the child spoke in a whisper, and was exceedingly ill.

Having stated that the case was one of true diphtheria, the parents requested that anti-toxin might be used. I injected 5cc. Behring's anti-toxin (obtained from Mr. Bruck) between the scapulae, having anaesthetised the place with ethyl chloride. Next day the child was much better, and the membrane had mostly gone, and two days later all membrane had disappeared, and the child was well.

Dr. W. Camac Wilkinson, of Sydney, kindly examined a swabbing from the throat, and found the bacilli of true diphtheria.

HUXTABLE MEMORIAL FUND.

THE following gentlemen have subscribed to the above since last notice:—Drs. Thos. Dixon, G. H. Taylor, D. Grant (Melbourne), A. B. Carosso, and D. Luker.

W. H. CRAGO,

Hon. Treasurer.

PECULIAR POSITION FOR A HYDATID CYST.

By GREGORY SPROTT, M.D., C.M., D.P.H.
GLASG.; RESIDENT GENERAL HOSPITAL,
HOBART (TASMANIA).

To those who are collecting information regarding the positions that hydatid cysts may occupy, the following case may be interesting:—

J. H., *æt.* 32 years, was admitted into the General Hospital, Hobart, on August 13th, 1895, under the care of Dr. Butler, suffering from a large and painful swelling of the left cheek. She gave the following history:—Three months ago she felt a stiffness in her jaw, which gradually grew worse, until she was almost unable to open her mouth to enable her to take soft food. About three weeks ago, while attending to her household duties, she "felt something break," and about an ounce of clear fluid escaped from her mouth. After this the swelling partly went down, but the pain was very severe in the jaw. She then consulted her medical attendant, who treated her "for an abscess at the root of the tooth," but getting no relief she applied for admission here on above date.

On examination, her left cheek was much swollen. She could only open her mouth a very little way, and that with great difficulty. There was a pus-like discharge from the mouth. Her temperature was 102° F.

The two front molars of the left upper jaw were quite loose. The front one was much decayed, but the second quite sound. I removed them, but the soft elastic swelling still remained. While swabbing out the mouth I noticed a white-looking structure protruding from where I had extracted the teeth. This, as I pulled it out with the forceps, proved to be a hydatid cyst about the size of a duck-egg. Immediately the cyst was removed the swelling disappeared, and the patient experienced no further pain. She left the hospital two days afterwards, well.

Remark.—This case is interesting first because of the position of the parasite. Amongst the many cases reported at the Intercolonial Congress of 1892, and elsewhere, I have not noticed one mentioned as occurring in the jaw. Secondly, because of the diagnosis. It was at first thought to be an alveolar abscess, but, with a very careful history, one might have avoided this mistake. There was no communication with the autrum, neither was the bone of jaw affected.

September 30th.—I saw the patient again

to-day. The stiffness of the jaw had gone. The cavity had filled, and the gum assumed its normal condition.

SEVEN SUCCESSIVE CASES OF TRUE DIPHTHERIA TREATED SUCCESSFULLY WITH BEHRING'S ANTI-TOXIN.

W. CAMAC WILKINSON, M.D. LOND., M.R.C.P.,
LECTURER ON PATHOLOGY, SYDNEY UNIVERSITY.

THE value of the anti-toxic method of treatment has been so thoroughly established that it is not necessary to enter into details. Still there are certain points in diagnosis and treatment to which I may with advantage refer.

In all these cases the specific bacillus was easily discovered. I never merely swab the throat; but, instead, carefully pick off with a pair of forceps a portion of the membrane itself. In two cases I was able to make the diagnosis in the consulting-room, and in one case I injected the anti-toxin there and then. The diagnosis was made by staining a smear preparation, and afterwards verified by cultivation. By carefully removing a portion of membrane I have generally obtained almost a pure cultivation of the diphtheria bacillus.

In one case the patient was a lady who was suckling a four months old child. I thought it advisable to inject the infant with a protective dose of 200 immunity units. Under these circumstances, I thought it well to allow the mother to continue suckling during the day, provided she did not feel that this exhausted her strength. The flow of milk was so abundant that this plan actually relieved the mother. It is likely, too, that the mother, who had received the full dose of anti-toxin (No. II.), would give the child, through her milk, a further protection. There is a further point I should like to emphasise. I have seen at least ten cases of follicular tonsillitis—in two cases in very young children—in which the naked-eye appearances closely simulated diphtheria, and in two of the cases of true diphtheria I should have been inclined to pronounce in favour of follicular tonsillitis if I had not had the bacteriological examination to guide me. I am strongly of opinion that in many cases a diagnosis cannot be made without the bacteriological test.

Further, if I find no bacilli at the first examination, I pour out the serum into a Petri dish, and then smear the material over the surface. By this means one is able to examine the growths in a few hours with the micro-

scope, and the colonies of diphtheria bacilli can be recognised by an experienced bacteriologist. When the colonies are few this method is of considerable value.

For the injection itself, I find no instrument to equal Koch's syringe, large enough to contain 10c.cm. of fluid. It is easy to sterilise, and of the simplest construction. For several years I have used Koch's syringe for all injections, and I find that it is the most satisfactory of all syringes. The only objection that can be urged against it is that the rubber balloon is liable to perish in this climate. However, I have had one in use for several years. In the Pathological Laboratory at the University I use no other syringe.

On two occasions I injected children with anti-toxin before I made the bacteriological test, and subsequently proved that they were not suffering from true diphtheria. In neither case was there any injurious effect. So far, I have seen the urticarial rash in one case only. The worst effect I have seen is a temporary arrest of the renal excretion, and this is probably due to the carbolic acid used to preserve anti-toxic serum.

I may add that tubes containing serum for cultivation purposes are being distributed in Sydney that cannot be trusted. I obtained one of these tubes, and compared them with tubes of my own containing serum prepared after Loeffler's method. These tubes, which are said to be Roux's tubes, and may be prepared by agents in Sydney—responsible or irresponsible—yielded no visible growth in eight hours, while my tubes contained multitudes of colonies. A negative result with such media is of no value in diagnosis. *Experientia docet.*

CLINICAL LECTURES

ON HYDATID DISEASE.

BY ALFRED AUSTIN LONDON, M.D. LOND.,
LECTURER ON FORENSIC MEDICINE AND
ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

II.—THE ADVENTITIOUS SAC OF HEPATIC HYDATIDS.

(Continued from page 361.)

(i) The Condition of the Adventitious Sac after Operation.—Classification of Operations.

THE various operations for hydatid disease, the effects of which upon the adventitious sac we have now to consider, may be conveniently grouped under three headings, viz.—(1). Those operations which involve the passage of a

needle into the hydatid cyst. (2). Those which establish a track through which the cyst may be ultimately removed. (3). Those which effect the immediate evacuation of the hydatid cyst and its contents.

(1.) Under the first heading are comprised three operations which are intended to effect the same object, though by widely different means, namely, to cause the death of the living cyst. They are the aspiration of the fluid contents, the passage of a current of electricity through the cyst, and the injection of a parasiticidal fluid. These operations are perhaps all equally effectual in that they cause the rupture of the mother cyst; but the withdrawal of the hydatid fluid, the passage of the electric current, or the injection of the poison, is probably a superfluous detail, the real injury being done by the needle. An aspirator needle, however fine, does not merely puncture the laminated membrane, it lacerates it, so that, in addition to the fluid sucked into the barrel of the aspirator, a quantity is rapidly effused into the adventitious sac; of this some may be soon absorbed by the wall of the sac, giving rise to a diminution in the size of the tumour and of the tension within the sac. These conditions are therefore practically the same as if the hydatid cyst had ruptured spontaneously into a sac,* so that we may expect to meet, and we do meet, with (a) effusions of serum, bile, or of blood into the sac, (b) retrograde changes in the cyst and its fluid, (c) sclerosis and calcification of the sac, and (d) perhaps suppuration within the sac, and the train of consequences which we have already† described, and therefore need not further dilate upon.

(2). The two operations which involve the establishment of a track, through which the cyst and its contents may in course of time be expelled, are nowadays almost obsolete, and require but a brief notice. They are the insertion and retention of a large canula (canule-à-demeure), and the use of caustic (method of Recamier). The hydatid fluid escapes of course immediately, with perhaps a few daughter cysts, or even a portion of the mother cyst; but in the majority of cases the cyst remains behind and becomes putrid, so that, unless it be then speedily evacuated, a tedious suppuration of the sac occurs, followed by healing by granulation in favourable cases, or by the establishment of a fistula which discharges pus and bile in less favourable cases, or by general septicæmia in many instances.

(3). By far the most important operations are

those which involve the incision of the adventitious sac, and the immediate evacuation of the mother cyst and of any daughter cysts that it may contain. Numerous operations, some of them in two stages, have been suggested, but that known as Lindemann's is now almost exclusively adopted. Australian surgeons are practically agreed that such an operation is preferable to those tentative measures, themselves not free from danger, which only at best cause the death of the cyst, and which, even after the lapse of many years, may have to be supplemented by a radical operation.

(j) *The Behaviour of the Adventitious Sac after Incision Operations.*

Supposing that we have to deal with a simple case of a still-living hydatid cyst of the liver, in which perhaps there are no daughter cysts, and in which the peritoneal surface of the sac has not acquired adhesions to surrounding structures, and assuming that the operation is performed with proper antiseptic precautions, the results, both immediate and remote, may be most satisfactory. The plan of operation most in vogue, as you know, is to stitch the sac after incision to the skin, to irrigate its interior after evacuating the cyst, and to leave a drainage-tube in the cavity. Some years ago Dr. J. C. Verco published the notes of a case to which I have alluded before*, where the patient, a child eight years of age, succumbed to convulsions four days after operation. The cyst was a large one, for besides projecting as an abdominal tumour it had excavated the whole of the right lobe of the liver, which was adherent to the diaphragm, but yet wherever the walls of the sac could come into apposition, they had united by first intention. Such a result can only be expected throughout the sac in its entirety where the cyst largely projects from the surface, and has not excavated the liver, for the intra-hepatic portion of the sac is very unlikely to collapse, even when there are no adhesions to the diaphragm, since neither thoracic nor abdominal pressure can exert sufficient influence upon it. In a favourable case the drainage-tube need not be left in many days, and after its removal the track closes rapidly.

Supposing, however, that our case is one of a cyst which contains many daughter cysts, the result may be just as satisfactory, provided that the daughter cysts are all evacuated at the time of operation; but it is more than likely that some smaller cysts will remain behind, unless the whole of the internal surface of the sac can be inspected, which is seldom possible. In such a case the drainage may have to be continued for a longer

* *Vide* section "c," p. 320.

† *Vide* page 319.

* *Trans. S. A. Branch B. M. A., November, 1886. Vide p. 321.*

period, and there will be delay in the final closure of the sac, but the discharge may merely be serous, and suppuration need not occur.

It is a very common occurrence for a discharge of bile to take place after operation. The discharge may commence within a few hours, and may continue for an indefinite time, for days or for weeks, and it generally is very considerable in amount. It is obviously due to the diminished intra-saccular pressure leading to rupture of a thin-walled bile channel. This event again indefinitely postpones the closing up of the drainage-tube track, but it need not involve suppuration; merely a biliary fistula remains, and this even where there is no suspicion of obstruction of the main bile ducts. Another cause for the persistence of a sinus is a deep stitch, but this does not necessarily indicate that there is a communication between the exterior of the body and an unobliterated sac cavity.

We may have to operate upon a cyst which has already ruptured into its adventitious sac, but which has not undergone any marked retrograde changes. In all probability, we shall find that the fluid is bile-stained, and the discharge of bile will persist after the operation. Later on, if the antiseptic precautions do not fail, we may find aseptic bile-stained sloughs of portions of the sac coming away, as in Case III.*, where a piece of sac was found to measure about forty-four square inches. Although we should naturally expect that necrosis of the sac would predispose to hæmorrhage, this event is very rare after operations upon liver cysts. I have neither seen it occur, nor can I recall any case in which it caused death or threatened danger.

In another class of cases we find degeneration of the cyst more or less pronounced, but no sign of suppuration of the sac. If all the hydatid debris be removed at the time of operation, and the sac be thoroughly irrigated, there is nothing actually to prevent healing by first intention, or by granulation with serous discharge; but the low vitality of the adventitious sac tends to cause necrosis, and its rigidity prevents immediate apposition of its walls, and leads to retention within the cavity of fluid, which is liable to become purulent. Actual calcification of the sac of course enhances the difficulty of obtaining primary union or an aseptic healing.

Supposing, lastly, that suppuration of the adventitious sac has already occurred at the time of operation, we may then either succeed or fail in endeavouring to render the interior of the sac aseptic after evacuating its contents, including any pyogenic membrane that may be

found lining the sac. If we are successful, then again there is nothing to prevent closure of the sac by first intention, or at all events healing with only a serous discharge from the wound. For various reasons however the discharge often continues to be purulent. In the first place, it is not easy to be sure that we have thoroughly emptied the sac, for even after prolonged douching we may find that daughter cysts have remained behind, and are acting like foreign bodies in keeping up suppuration. In the second place, it is not easy to render, or keep, aseptic the whole of the interior in many instances, especially if there is a tendency for the sac itself to slough. Sloughing of the sac, as we have seen, occurs without any suppuration,* but it is much more often encountered after suppuration, the sloughs being putrid, and their retention giving rise to septicæmic symptoms. I do not think that the sac ever exfoliates *en masse*, but the pieces that come away usually vary from a mere shred to a slough the size of the palm of one's hand. Here again the possible danger of arterial hæmorrhage is obvious, although it seldom occurs. Another danger is that of perforation of the sac into the peritoneal cavity, or into some neighbouring viscus to which it may be adherent:† such perforation might easily be provoked even by a soft drainage tube.

An operation and drainage will fail to avert a fatal result, if, as in some cases,‡ metastatic abscesses are already scattered throughout the lungs, liver and spleen; but pyæmia is only likely to ensue after operations if there be any putrid fragments left behind in the sac, or if pus accumulates in a pocket, and cannot be drained away. All these dangers are accentuated where marked degenerative changes are present, and especially where calcareous plates have formed in the wall or on the inner surface of the sac. Such calcareous plates require time in order to become detached from the wall; when loose they may excoriate the surface, and cause hæmorrhage: they may be too deeply situate to be easily extracted, or may be too large to be extracted without considerable laceration of the sac.

(k) Remote Dangers after Operations.

Although the operation may be quite satisfactory in its immediate results, certain remote events may tend to interfere with the ultimate success of the case. Case IX. illustrates a complication (happily not fatal in this instance,

* Vide case III., p. 231.

† Vide cases reported on pp. 198, 361.

‡ Vide cases reported in vol. xii., p. 81.

* Vide p. 231.

though it caused considerable delay in the recovery of my patient), which is not uncommon in association with a hydatid of the liver which has suppurated. In this instance the empyema appeared to commence after the operation, and the hydatid itself, although degenerate, had not caused suppuration of the sac. In another case* the operation would undoubtedly have been followed by recovery had it not been for the existence of adhesions between the liver and the pelvis, which caused sudden and rapidly-fatal colic by compressing the intestines, at a time when I had pronounced the patient to be quite out of danger. I have also seen an instance of the patient succumbing in consequence of injury done to the liver by a hydatid cyst which had been successfully removed twelve years before. Obstruction of the common duct had led to dilatation of the remote branch bile ducts, and later on an artificial communication had formed between the duodenum and the choledochus, which had allowed of direct infection of the bile ducts and ultimately of the formation of numerous biliary abscesses.

(1) *Inferences to be Drawn from the foregoing Facts.*

From what has been stated respecting the adventitious sac of liver cysts, we are justified in concluding that the death of the hydatid cyst, whether it occur naturally or be induced artificially, does not relieve the "host" of the real dangers due to the presence of a degenerating cyst in a degenerating adventitious sac. We are further justified in condemning operations which merely cause the death of the hydatid, and do not provide for its removal. Lastly, I think we may add that the dangers of incision operations are largely due to delay in operating, which allows of degenerative changes taking place in the sac.

CASE IX.—ILLUSTRATING EMPYEMA FOLLOWING OPERATION.

F. C., *æt.* 39. Private practice, 1894-5. Patient was operated upon for hydatid of the right lobe on February 24th, 1894. The mother cyst had degenerated, and both it and the numerous daughter cysts were deeply bile-stained; there was no evidence of suppuration. Convalescence was slow, owing to bed-sore forming. On April 1st patient had a severe attack of dyspnoea and expectorated pus, and again on April 16th. After this date he had hectic fever and profuse purulent expectoration constantly. On May 22nd the pleura was opened in the back in the seventh interspace, and much pus evacuated. Patient

now ceased to expectorate, and rapidly recovered. The abscess was not in direct connection with the hydatid cavity, for from this only a little bile was escaping. It was probably due to lymphatic absorption, I think.

CASE X.—ILLUSTRATING SUPPOSED CURE OF CYST BY ASPIRATION.—RADICAL OPERATION 20 YEARS LATER.—EXTREME DEGREE OF MACERATION OF THE CYST.

Mr. M., *æt.* 26. Private Hospital.

(I am indebted to Dr. Melville Jay for permission to publish this case, which was seen in consultation with him.)

For some three months patient had been ill off and on, with symptoms pointing to relapsing appendicitis. When he seemed to have thoroughly recovered from this, jaundice set in, and the pyrexia returned; the liver was only slightly enlarged, and there was no tenderness. Some twenty years previously the patient had been tapped in the abdomen for a hydatid cyst by the late Dr. Chas. Gosse. As no other adequate cause could be detected, it was suspected that the jaundice was in some way due to mischief set up by the old and "cured" hydatid, and an exploration was advised. Dr. Jay made several preliminary punctures of the liver through the chest wall with negative results. The abdomen was then opened by an incision parallel to the costal margin; the gall-bladder presented in the wound, and was felt to be moderately full, though not distended, and aspiration showed that it contained bile; no stone could be felt in the ducts. Passing the finger to the right of the gall-bladder, at first solid liver substance was felt; next a soft patch on the under surface, which was fluctuant, but did not project from the surface. Exploration through the thorax was again resorted to, and in the eighth space and mid-axillary line some yellow-ochrey, ropy fluid was obtained through the aspirator needle. A portion of the ninth rib was excised and the cavity of the hydatid opened, from which a few ounces of gelatinous material was evacuated with the aid of the douche; the finger passed into the cavity, which was the size of a small orange, could be felt through the soft patch on the under surface of the liver. The walls of the cavity bulged inwards, and gave it an irregular shape. The material evacuated from the cavity, and the fluid obtained through the needle* were found to consist of very degenerated laminated membrane. The patient made a good recovery, gaining about two stone in weight in about two months.

* This is referred to by the late Dr. Davies Thomas, in his paper on the "Operative Treatment of Hydatid Disease, &c." *Vide Aust. Med. Journal*, 1888-89.

* *Aust. Med. Gaz.*, p. 330.

PROCEEDINGS OF BRANCHES.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE 31st general meeting of the Branch was held in the Royal Society's room, Brisbane, on Thursday, 12th September, 1895. Present—Dr. Jackson (President), in the chair, Hon. Drs. Marks and Taylor, M.M.L.C., Drs. Lyons, Orr, Macnamara, Fullerton, E. H. O'Doherty, Freshney, Lawes, Francis, and Hirschfeld.
Visitor: Dr. Sheaffe.

Dr. A. H. Murray was unanimously elected a member of the Branch.

Dr. JACKSON nominated Dr. P. J. Moloney, of Geraldton, and Dr. FRESHNEY nominated Dr. H. Russell Nolan, of Toowoomba, for membership.

The PRESIDENT read a letter from the Curator of the Brisbane Museum, acceding to the Council's request re Pathological Museum, on condition of no responsibility or expense.

It was decided that the consideration of matters connected with fees for public services be left over to next meeting.

Exhibition of cases and specimens:—

a Detachment of Retina ... Dr. Taylor.

b Spina Bifida ... Dr. Jackson.

c Result of Colles' Fracture, Dislocation of Elbow, and Fracture of Humerus in the same arm ... Dr. Jackson.

d Case and specimens of Anchylostomum duodenale ... Dr. Lawes.

Dr. LAWES read the following paper:—

ANÆMIA DUE TO ANCHYLOSTOMUM DUODENALE.—NOTES OF TWO CASES.

READ BEFORE THE QUEENSLAND BRANCH OF B.M.A. BY C. H. E. LAWES, M.B., CH.M. SYD., LATE RES. MED. OFFICER, BRISBANE HOSPITAL.

As cases of anæmia due to the presence in the duodenum of the *Anchylostomum Duodenale* parasite are more frequently coming under observation in Queensland, the notes of the two following cases seem worth recording.

I.—Henry T., aged 14 years; admitted to the Brisbane Hospital on August 23rd, 1895, under the care of Dr. Lyons, to whom I am indebted for permission to read the notes of the case. The patient was born in England, but had been in the colonies for the last five years. He had lived all this time in or about Cudgen, Tweed Heads, N.S.W.

The history of the case was as follows:—Some time ago the boy ran away from home, and lived as best he could in the bush for about a month. He returned home, about eight days before admission to the hospital, in a half-

starved condition, and evidently very ill. His feet were swollen, and he was very short of breath. These facts were obtained from the mother, who apparently had not noticed much wrong with the boy up to the time of his running away. However, the patient himself (who was a very intelligent lad) told me that he had been short of wind for about two years, and had been unable to run about much. He also told me that his family obtained their drinking water from an open well, to which cattle and dogs had access.

On admission the patient was markedly anæmic. The face was puffy, and swollen under the eyes. The abdomen was distended, and the legs and feet considerably swollen, pitting easily on pressure. He had a troublesome dry cough, and a considerable amount of dyspnoea. The temperature on admission was 99.4°, the pulse 132, and the respirations about 35. The urine on admission was acid (sp. gr. 1008), and contained no albumen.

On physical examination, his condition was found to be as follows:—

Respiration.—The whole chest was rather hyper-resonant on percussion. On auscultation a number of cooing sibili and rhonchi were to be heard all over the chest; in fact the chest sounded like a dove-cote.

Circulation.—Pulse full and bounding—120. There was marked pulsation in the epigastrium. The apex-beat was in its normal position, and area of superficial cardiac dullness a little increased. On auscultation, a loud, booming murmur was to be heard all over the chest, apparently systolic in time, and conducted both up into the axilla and into the vessels of the neck. The second sound was accentuated in the pulmonary area.

Abdomen.—The abdomen measured 26 inches in circumference at the level of the umbilicus. On palpation, the liver was felt to be considerably enlarged, completely occupying the right hypochondriac, epigastric, and left hypochondriac regions, and its lower edge could be felt at the level of the umbilicus, and even below it in parts. It was tender to the touch.

On percussion, the liver dullness was found to commence above at the upper border of the seventh rib, and to extend downwards for about 4½ inches, the lower border of the dullness being a good hand's breadth below the level of the ribs. The dullness extended across the abdomen as far as the left nipple line.

On the day after admission portion of a motion was examined microscopically, and numbers of the ova of anchylostoma were found in each specimen.

The patient got steadily worse after admission. The dyspnoea became much greater, and very distressing, and he developed acute pain over the region of the liver.

The temperature ranged from 100° to 101°. He died on the evening of August 29th, six days after admission.

A *post-mortem* examination was held next day, of which the following are the notes:—

Rigor Mortis.—Present.

General Nourishment.—Face and legs oedematous; abdomen distended; marked anæmia.

Circulation.—The pericardial sac contained considerably more serous fluid than it normally should.

Heart.—Weight (after opening), 11 ounces.

Valves.—*Aortic*: Each segment of this valve was fenestrated, containing a distinct hole near its attachment to the neighbouring segment.

Pulmonary: One segment was fenestrated in a similar way to the aortic valves. The tricuspid and mitral valves were normal.

Ventricles.—The muscular walls of the ventricles showed signs of fatty degeneration, specially well marked in the right ventricle.

Respiratory.—There was a considerable amount of serous fluid in the left pleural cavity. There was a small amount also in right pleural cavity, with a few soft adhesions. The lungs were both oedematous at the bases.

Gastro-intestinal.—*Stomach*: Normal.

Intestines.—The duodenum was very congested, and contained a great number of the *Anchylostomum duodenale* parasites. Most of these were adherent to the mucous membrane, some requiring a strong pull with the forceps to detach them. The worms were found also throughout the jejunum, though their numbers were much less in this situation, and were apparently not adherent. The last worm was found at a distance of 8½ feet from the pylorus. No movement could be detected in any of them.

In the cæcum were found numbers of the whip-worm (*Tricocephalus dispar*). There was no congestion of the intestine except in the duodenum.

Liver.—Weight, 3 lbs. 7 ozs. Distinctly fatty.

Kidneys.—Both weighed 5½ ozs., and were pale and fatty.

Spleen.—Somewhat enlarged. Weighed 7 ozs.

II.—The second case is that of the boy whom you have seen to-night.

E. McG., aged 15; admitted August 26th, under the care of Dr. Kebbel. He was born at Woodford, near Brisbane, and lived successively at Caboolture, Coochin Creek, and Esk. He had lived at Esk for the last three years.

On admission, he stated that for the past two months he had suffered from great weakness, his feet becoming swollen and making him unable to walk. He was markedly anæmic, and was slightly short of breath, but there was no oedema. His temperature on admission was 99·4°, and pulse 120. The urine was acid (sp. gr. 1010), and contained no albumen.

The *liver* was found to be considerably enlarged, its lower edge extending about two inches below the ribs.

The *spleen* was also enlarged, its lower margin being about two fingers' breadths below the level of the ribs.

On listening to the heart, a soft murmur is to be heard in the mitral area, systolic in time. In the aortic area a murmur is also to be heard, apparently diastolic, but its character changes from time to time, and it is probably a hæmic murmur.

A portion of the motion was examined microscopically the day after admission, and found to contain numbers of *anchylostomum ova*.

The patient's temperature since admission has been variable, sometimes rising as high as 100·8°, but not higher than this.

His general condition has improved considerably under iron, but no adult worms have so far been found in the motion. He was at first put on salol, but we are now trying him with thymol, and hope to have better results with this.

A short account of the parasite concerned in these cases may not be out of place.

It goes by the names of *Anchylostomum* or *Sclerostomum Duodenale* and *Dochmius Duodenalis*. It probably occurs in all hot countries, but seems to have been most carefully observed in Brazil and Egypt, where it causes the so-called "Egyptian Chlorosis." The worm is cylindrical in form, about half to two-thirds of an inch in length. The males are more slender than the females, and may be distinguished from them by their expanded caudal extremity. The females possess a stiff and sharply-pointed tail. They are usually loaded with ova.

The ova can be readily seen in the motions when examined microscopically. A small portion of motion is diluted with water and mounted on a slide. The ova can be found with a low-power and then examined under about one-sixth inch objective. They are oval, and possess a distinct envelope. The cell contents are usually seen in process of segmentation, and a nucleus can be distinctly made out in each segment. According to Fagge, they measure

one-twentieth of a millimetre in length. They somewhat resemble the ova of the thread-worm, but are distinguished from them by being broader and having blunter extremities. Moreover, the ovum of the thread-worm invariably contains a fully-developed embryo, whereas the *Anchylostomum* ovum shows segmented cell contents, and, so far as I know, a fully-developed embryo has not been observed in it.

The worms are found mostly in the duodenum and upper part of the jejunum. They attach themselves firmly to the mucous membrane of the intestine by two pairs of teeth, wound the surface, and suck the blood, on which they live. The spot to which the worm is attached is marked by an ecchymosis, and Leuckart thinks that it shifts its position from time to time, and that the punctures which it leaves may then go on bleeding.

The parasites may be present in great numbers, as many as 1,250 having been counted in one patient.

The life history of the *Anchylostomum* has not, I believe, been clearly traced, but the disease is supposed to be propagated mainly by drinking water in which the ova or parasites are contained, no intermediate host being required.

The symptoms due to the presence of these worms are simply those of deep and steadily-increasing anæmia, and often terminate fatally. Some of the patients are said to exhibit abnormal appetites, eating sand, clay, keys, etc., but this symptom has not been present to any marked degree in the cases I have seen.

As to *treatment*, numbers of drugs have been tried, but none seem to cure the disease. Various vermifuges, including male fern, santonin, kamala, etc., have been tried, but with very little success in dislodging the parasite. From its position the worm is pretty secure from injections *per anum*. Iron is of service in improving the condition of the blood, and some cases have improved under increasing doses of arsenic. *Thymol* has been recently recommended, and is still on its trial. Turpentine, assafoetida, and B-naphthol have also been tried.

Hon. Dr. TAYLOR said: I regret that I have no practical experience of the *Anchylostomum duodenale*, and until the last three or four years have not heard of cases in Queensland. I don't think the disease has been generally recognised in Queensland. The first account which I read was furnished by a gentleman in Cairns or Port Douglas, and he described the fact that a number of children had taken to eating clay, and on investigation he found the ova of the parasite in the motions. I am not aware that the disease is very prevalent here. Possibly more cases of anæmia than we suspect are due

to the presence of the parasite, and I think we ought always to be on the look-out for it in cases of marked anæmia which will not yield to the ordinary remedies. We are indebted to Dr. Lawes for an interesting paper this evening, and the exhibits he has shown us.

Hon. Dr. MARKE said: I have to repeat very much what the Hon. Dr. Taylor has said. I have had cases of anæmia which, no doubt, may have been due to this parasite, although at the time I have not recognised the cause. I was not aware that it was in Brisbane, and I have to thank Dr. Lawes for his valuable paper to-night. I will be very careful to look for the parasite in future cases of anæmia. Dr. Lawes had the advantage of being able to hold a *post-mortem*. I have never been able to verify any of my cases in that way. Most of the cases no doubt pass from one medical man to another, and finally gravitate to the Children's Hospital. I would like to ask Dr. Lawes if he has seen any cases there?

Dr. FRANCIS said: What made Dr. Lawes suspect it in this case? Are there any symptoms besides those of ordinary anæmia which should make one suspect the presence of the parasite? It is not always easy in private practice to examine motions.

Hon. Dr. TAYLOR: There was one point I overlooked—that is, in connection with the large spleen. Is an enlarged spleen usual in these cases? I don't suppose the condition of the heart had much to do with the anæmia, but I should like to know if this condition of the spleen has any connection with the parasite in the duodenum?

Dr. JACKSON: I would ask Dr. Lawes whether the disease has been frequently observed in adults. I have seen a few cases in children in the past few years, and, during the last fortnight, these two children. I have not seen cases in adults. We have always been in the habit of attributing the changes in the blood in cases of anæmia (pernicious, etc.) to the enlargement of the spleen, but it appears to me that possibly in these cases the anæmia, which is undoubtedly due to the loss of blood which the worms consume, may cause the enlargement of the spleen. Microscopic examination of the blood would perhaps throw some light upon this. There is a peculiarity about the anæmia in these cases. The amount of blood that is lost daily must be very small, and it extends over a long time continuously. It is somewhat different in this from other forms of anæmia arising from hæmorrhage, the latter rarely being in such minute quantities and so continuously.

Dr. MACNAMARA: Was that case a female? I sent a case to the Hospital some time ago—a rather peculiar case of a little girl with dropsy, but no albuminuria. She was under some doctor in Townsville, but he could not make out what it was, and I could not. She was sent to the Hospital, and died next day. I heard she had finally developed Bright's disease, and the urine contained a large amount of albumen.

Dr. LAWES: In answer to Dr. Francis—In any case of anæmia in a child which persists, and for which there is no apparent cause, it is always worth while examining the motions. I don't think there need be any difficulty in private practice about examining the motions. The most minute portion of the motion will suffice. You can get enough between two slides to make a dozen cover-glass preparations from. Get the mother to bring a small portion of the motion in a bottle. In cases of anæmia with hæmorrhage from the bowels one should at once suspect the parasite. Dr. Taylor asked about the spleen. Nearly all the cases I have seen have had an enlarged spleen and liver also. I am not prepared to enter into the

exact causation of this enlargement, or its relation to the anæmia. Dr. Jackson asked about the occurrence of this parasite in adults. Dr. Hogg, who was then in Goodna, recorded a case in the *Australasian Medical Gazette* of February, 1889. The patient was a male inmate of the Asylum, and the diagnosis was verified by *post-mortem* examination. More recently, I believe, a case was met with at the Dunwich Asylum in a male, where the worms were found in *post-mortem*. I have never seen a case in an adult myself. I don't know of the case Dr. Macnamara mentioned. I believe there are a great number of these cases in Queensland. It was at first supposed that all cases came from the North, but nearly all the cases I have seen have been living not very far from Brisbane. Thus, several came from the Caboolture line, Landsborough, &c. This last fatal case lived at Oudgen, which is in New South Wales, just over the border, and the other case comes from Esk. It is, therefore, evidently not confined to tropical Australia. The unfortunate thing is that no treatment has so far been found efficacious in expelling the worms and curing the disease.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY MEETING, held at the Adelaide University, on 24th October, 1895. Present: The President, Drs. Giles, Stirling, Symons, Way, Borthwick, Irving, Hayward, A. A. Hamilton, London, Marten, Hone, Archer, Goldsmith, Russell, Cudmore, Prof. Watson, Drs. J. A. G. Hamilton, Teichelmann, Evans, Gault, Lawrence, and Hon. Sec. (Dr. Swift).

Dr. STIRLING showed a man with general analgesia.

Dr. GILES, a man upon whom he had successfully operated for a wide cleft palate.

Dr. HONE, a man with facial palsy after injury.

Dr. MARTEN exhibited a calculus removed from the tonsil by Dr. Strangman.

Minutes of last meeting were taken as read, on the motion of Dr. LONDON, seconded by Dr. HAYWARD.

Dr. LONDON moved, and Dr. HAYWARD seconded,—"That a Parliamentary Bills Committee be appointed each year at the annual meeting. That the President and Hon. Sec. (*ex officio*), Dr. Stirling, O.M.G., and Hon. Dr. Magarey be appointed a committee to act till the end of year."—Carried.

HON. SEC. read a letter from Dr. Clindening, resigning his membership of Branch.

Dr. STIRLING moved, and Dr. WAY seconded, that Dr. Clindening's resignation be not accepted, and, that if possible, means be taken to devise a method whereby he may be made a hon. member.

HON. SEC. read a letter from hon. sec. of Queensland Branch re action of the Branch in reference to the management of lepers.—Matter referred to Council to deal with.

Dr. BORTHWICK read his paper of diphtheria, which was illuminated by numerous lantern slides.

Paper was discussed by the President. A vote of thanks was moved by Dr. STIRLING, and seconded by Dr. LONDON, to Dr. Borthwick, and to Mr. Rogers for his assistance with the lantern.

DIPHTHERIA AND ITS TREATMENT BY ANTI-TOXIC SERUM.*

By T. BORTHWICK, M.D. EDIN., HON. BACTERIOLOGIST TO THE ADELAIDE CHILDREN'S HOSPITAL, AND M.O.H. FOR KENSINGTON AND NORWOOD, &c.

DIPHTHERIA is a disease which fulfils all the requirements necessary, as formulated by Koch, to establish its causal relationship to a specific micro-organism. Thus: (1) a certain micro-organism is invariably found in the lesion; (2) this microbe can be separated and cultivated on artificial media through successive generations; (3) by inoculation of the micro-organism so cultivated the same disease can be set up in another animal; and (4) the micro-organism can be again found in the lesions set up in this latter animal. Not only are these requirements capable of absolute proof, but another has been demonstrated by Sidney Martin, viz. (5), toxins can be separated from the pure cultures of these microbes, which, when injected into an animal, produce the characteristic symptoms of the disease.

Natural History of Diphtheria.—It may thus be accepted as an established fact that diphtheria is due to a specific micro-organism, which is known as the Klebs-Löffler bacillus, after its discoverers. As the term further implies, it is a rod-like body; and its dimensions may be indicated by stating that it is somewhat shorter, and at the same time thicker than the tubercle bacillus. It may be straight or slightly curved, and is usually rounded at the ends; but the morphological features are not constant. These bacilli are found on mucous or other surfaces, and when a false membrane is formed they exist chiefly on its free surface. They are not capable of penetrating into the tissues or fluids of the body, but associated with them are usually to be found strepto-cocci, staphylo-cocci, and other micro-organisms, some of which are able to enter the living tissues. This association has a significance which will be referred to later.

Diphtheria is characterised by primary and secondary symptoms, followed by various complications. The primary symptoms consist of a local lesion, generally of a mucous surface, with the formation of a false membrane, which may occasion mechanical obstruction in certain

*The paper was illustrated by lantern slides, kindly supplied by Dr. Sydney Martin for the purpose. They showed the Klebs-Löffler bacilli from pure cultivation and *in situ* in section of membrane, also nerve and muscle lesions produced by injections of toxin, and various charts of the effect of toxin and anti-toxin (separately and conjointly) on the temperature and weight of animals.

positions. But the presence or absence of a false membrane cannot be relied upon as a sure diagnostic sign, because in diphtheria it may be absent, or so slight as to be overlooked, and because in other kinds of sore throat a spurious membrane may be seen. Hence, an early diagnosis must rest on a bacteriological examination, and the presence or absence of the specific bacilli in the lesion. The secondary symptoms are those of a general toxic condition—great constitutional depression, heart failure, paralysis, albuminuria, &c., and it follows from the localisation of the bacilli that these symptoms must be set up by the absorption into the system of some poison produced at the point of lesion. The complications are bronchitis, broncho-pneumonia, and other affections of a septic type—a result of the association of the various cocci with the specific bacilli.

The poisons produced by micro-organisms generally have been termed "toxins," and it has been found that each species produces its own peculiar poison. Such toxic products may be the result of saprophytic bacteria growing on any organic medium, or of pathogenic bacteria growing in the living body; and a chemical examination has shown that the toxicity depends on the presence of ptomaines and albumoses. The former are alkaloidal bodies, and stand in close relationship to the alkaloids produced by the higher vegetables, as strychnine, morphine, atropine, &c. The latter are proteid substances, and cannot be distinguished chemically from one another, or from the transitional bodies which are intermediate in ordinary digestion between albuminous compounds and true peptones. Nevertheless, each has its own distinguishable physiological action.

The toxins of diphtheria were first studied by Löffler, then by Roux and Yersin; and these latter observers arrived at the conclusion that the substances in question were of the nature of onzymes or ferments. Sidney Martin carried the investigation further. He was able to separate from the tissue of patients who had died of diphtheria two substances, one being an albumose, the other an organic acid; the latter apparently taking the place of the final alkaloidal product of other bacteria. The albumose could not be distinguished by chemical analysis from other albumoses, but its physiological action was well marked. When injected into an animal it produced a local transient oedema, and when the injections were frequently repeated (rabbits being the animals employed) there followed a rise of temperature, diarrhoea, loss of weight and a progressive paresis depending on degeneration of the peripheral nerves.

and wasting of the muscles. The degeneration of the nerves consisted in a breaking up of the nerve fibres, as he was able to demonstrate under the microscope, and the wasting of the muscles was the result of fatty degeneration.

The organic acid was found to exist in smaller quantity than the albumose, but its physiological action was somewhat similar, although less toxic. He next separated an albumose and an organic acid from pure cultures of the Klebs-Löffler bacillus, and proved their action to be the same as in the case of those obtained from the tissues of the body. When, however, the false membranes were examined by themselves, there could be detected only very small quantities of albumose and organic acid; yet, a single injection of the extract of these membranes produced necrosis of the tissues locally, and the same effect generally as multiple doses of the albumose itself. There was thus physiological proof of the existence in the membranes of a very virulent poison; and, as a single dose of this poison was able to produce effects which required multiple doses of albumose, and at the same time taking into account its other reactions, it was judged to be of the nature of a ferment which probably corresponded to Roux and Yersin's ferment. It may be assumed, then, that there is produced at the local lesion by the bacilli a ferment which acts partly on the membranes, but principally, after absorption into the system, on the proteids of the body with the formation of albumose and organic acid.

It has already been stated that the albumoses resulting from bacterial growth, are indistinguishable chemically from those of ordinary digestion, and the following table given by Sidney Martin graphically illustrates the close relationship of the two processes:—

Primary agent.	Ferment.	Digestive products.
Living cell ..	Pepsin	Syntonin, hetero-albumose, proto-albumose, deuterio-albumose, peptone.
Living cell ..	Trypsin	Globulin-like body, tryptone (peptone), leucin, tyrosin, a bitter body.
Bacillus anthracis	—	Hetero-albumose, proto-albumose, deuterio-albumose, peptone, leucin, tyrosin, an alkaloidal body (base).
Bacillus diphtheriæ	Diphtheria ferment (Roux and Yersin's poison) found in the membrane	Hetero-albumose, proto-albumose, deuterio-albumose (found in the membranes); proto-albumose, deuterio-albumose, (peptone), organic acid, &c. (found in the body).

Before proceeding further, it may be of advantage to summarise the main points which

have been so completely worked out in the natural history of the disease:—(1) The Klebs-Löffler bacillus establishes itself on a mucous or other surface, probably on a pre-existing lesion or some other favourable nidus. (2) The specific bacillus may be associated with various cocci and other micro-organisms. (3) The bacillus secretes a poison of the nature of a ferment. (4) The ferment produces a local necrosis of the tissues which gives rise to the formation of a false membrane; it further acts on the membrane to a slight extent, after the manner of a digestive ferment, but it is principally absorbed into the system, where it digests the proteids with the formation of albumose and organic acid. (5) These products are toxic in their action, and set up fever, diarrhoea, loss of weight, and a progressive paresis depending on a segmental neuritis and fatty degeneration of the muscles. (6) The cocci may give rise to various complications, especially of a septic type.

Indications for Effective Treatment.—The above facts enable us now to consider in what direction the effective treatment of diphtheria must be looked for. It is evident that, however valuable local treatment may be, such treatment can have no effect on the toxins which have been already absorbed into the circulation. Bactericidal substances applied locally may doubtless prevent the further formation of the poison, but something more is required. It need hardly be pointed out that, as the bacilli do not exist within the body, the administration of bactericides or antiseptics internally would be of no use. What is required is something that will destroy, or neutralise, or antagonise, or in some way modify the poisons circulating in the body, and it is claimed such a result has been obtained by the use of so-called "anti-toxic serum."

Scientific Basis of Serum-therapy.—It will be of interest to trace in outline the various steps which have led up to this new form of treatment. In the first place, certain facts had been accumulating, although they had not all been acquired directly in relation to diphtheria. For instance, it was well known that an attack of some infective diseases rendered the patient insusceptible to another attack for a longer or shorter period. This result could only be due to the using up of certain substances in the body necessary for the growth of the micro-organism, or to the production in the body of certain substances which had a protective power. That it was owing to the latter rather than to the former was indicated by some experiments of Klemensiewicz and

Escherich, which showed that guinea-pigs could be rendered immune to diphtheria (injections of pure cultures of diphtheria bacilli) for from twenty to forty days by a previous injection of blood serum obtained from a patient just convalescent from the disease, while no protective action was afforded by blood serum obtained from adults who had not suffered from the disease. Others demonstrated a protective influence of the blood serum of convalescents from tetanus, cholera, typhoid fever, and pneumonia, in relation to these diseases respectively. Then Behring showed that the blood serum obtained from animals which had been treated by injections of modified cultures of the bacilli of diphtheria, or by injections of toxins separated from cultures of the bacilli, had a similar protective action; that is, the disease produced artificially in animals conferred the same property on the blood serum as the natural disease in human patients. He further showed that by introducing carefully-graduated and increasing doses into some animals, the animals were rendered more and more insusceptible to the disease, and the blood serum acquired a very high degree of protective power; also that the serum so obtained was curative, as well as protective. This anti-toxic action has been confirmed over and over again by experiments on guinea-pigs; and it is manifested whether the serum be administered a short time before, a short time after, or simultaneously with the pure cultures or the toxins. In fact, the proportions can be so accurately estimated that a fatal dose, or ten times a fatal dose, of toxin can be mixed with certain amounts of serum in a test-tube and be followed by a negative result when injected into an animal. Some recent experiments by Klein go to prove that the two actions possessed by the serum—namely, the anti-toxic and the immunising actions—do not necessarily run on parallel lines, and that they are owing to two different substances contained in the serum. He has been able to prove that serum obtained by using injections of toxins possesses a high anti-toxic power and a low immunising power, while serum obtained by using injections of pure cultures of the bacilli possess a relatively high immunising power and a low anti-toxic power. What these substances in the blood serum are remains to be discovered. They have been called, provisionally, "anti-toxins," and Klein assumes that they are of the nature of ferments. According to Woodhead, they are probably the result of the activity of certain cells of the connective tissue and blood-cell groups which are stimulated by the toxins, and

become so modified in self-defence as to produce a protective substance. The problem now was to produce this anti-toxic serum in sufficient quantity and of sufficient strength to render it available as a therapeutic agent, and the process ultimately adopted will be described in as few words as possible.

Preparation of Anti-toxic Serum.—The toxin is first prepared as follows:—A pure culture of diphtheria bacilli is added to alkaline beef-broth, containing 0.5 per cent. of common salt and 2 per cent. of peptone, the broth being placed in a vessel so constructed as to allow a current of sterile moist air to pass over the surface or through the body of the fluid. The free passage of air favours the growth of the bacilli, and the added moisture prevents evaporation of the fluid. After incubation at 37° C. for a month, there should be sufficient toxin present, both as regards quantity and quality, if the growth has gone on satisfactorily. The growth is now filtered through a Pasteur-Chamberland filter, which keeps back the bacilli and so allows the fluid containing the toxin to pass through absolutely sterile. Although every precaution is adopted throughout the process to prevent contamination with foreign micro-organisms, it is necessary to make sure of the success of these precautions by making cultivations of the broth at the end of the process, and it is also advisable to make sure that the toxins are sterile after filtration. The strength of the toxin is then tested, and it should be such that 0.1 c.cm. of the fluid will kill a guinea-pig weighing 500 grammes in 48 hours. The toxin is then ready for administration to the horse, which has in the meantime been proved to be free from glanders and tuberculosis, respectively, by injections of mallein and tuberculin. The horse is the animal selected because it is very slightly susceptible to the disease, and because a large amount of blood can be drawn off with apparent inconvenience, and a clear serum readily obtained from the blood. Very small doses of the toxin are used at first, 1 to 2 c.cm. being the initial amount injected. The injection causes a soft diffuse local swelling, and some constitutional disturbance manifested by rise of temperature; but this reaction soon disappears, and then the injection is repeated in the same dose. This is followed according to the reaction produced by gradually-increasing doses, as 5, 10, 25, 50, and so on up to 200 c.cm. Horses vary considerably in the reaction produced by the toxin; some suffer severely from the first dose of 1 c.cm., while others can stand an increase from 10 to 100 c.cm. without any marked effect. As

a rule, there is very little trouble in this respect; and it may be added that the horses show no intractability during any of the processes. The injections are made in front of the shoulder, after the part has been washed, first with ether and then with a 5 per cent. carbolic lotion, and the instruments are boiled before and after being used. As a general rule, it takes three months before the serum is rendered sufficiently anti-toxic; but this can only be determined by drawing off some of the blood at intervals, and testing its strength against toxin on guinea-pigs. When the strength is found to be up to the mark, an incision is made over the jugular vein of the horse, after the part has been shaved and washed with a 5 per cent. carbolic lotion, and a canula is inserted into the vein. As much as 10 litres of blood can be drawn off at once, and it is received through a tube attached to the canula into sterilized vessels—preferably, Kitasato flasks. When the canula is withdrawn pressure is exerted by the finger on the vein anteriorly, while the wound is being stitched; the wound is then dressed with iodoform and sterilised wool dipped in collodion, and it may be added that the vein never becomes obliterated, however often bleeding may be performed. The same animal may be bled again and again at intervals of a month without injury to its health, and the serum maintains its anti-toxic quality, provided the treatment with toxin is continued during the intervals. The vessels containing the blood which has been drawn off are set aside in a cool place for twenty-four hours, to allow the serum to separate from the blood-clot; and after filtration the serum is ready for use. The utmost precautions to maintain asepsis must be observed throughout, otherwise the serum would become contaminated, and soon decompose; and, in order to prove whether it is sterile or not, it is allowed to stand in the incubator for some time before being sent out for therapeutic purposes. The quality of the serum is tested thus:—A toxin is taken of which 0.1 c.cm. is fatal to a guinea-pig weighing 500 grammes, and of this toxin 1 c.cm., or ten times a fatal dose, is mixed in test-tubes with varying quantities of the serum. Each mixture is then injected into a guinea-pig, and the result noted. When 0.1 c.cm. of the serum is found to be exactly sufficient to antagonise the 1 c.cm. of toxin—that is, when these two quantities mixed together and injected into a guinea-pig do not produce any symptoms, while a slightly smaller quantity of serum mixed with the above amount of toxin would be followed by some reaction, the serum is termed “normal” by

Ehrlich and Behring; and 1 c.cm. of such normal serum is said to contain one "immunisation unit." The serum obtained from some horses may be stronger or weaker than the normal, but the strength can always be expressed in terms of units. For instance, if 0.3 c.cm. of the serum is required to antagonise 1 c.cm. of the toxin, the serum would only contain 0.3 immunisation unit; or, if only 0.01 c.cm. of the serum was required, then it would contain 10 units, and so on. Some horses may be so highly immunised as to produce serum containing 50 or 100 immunisation units. Boux and Martin adopt a somewhat different method. They inject 0.01 c.cm. of the serum into a guinea-pig weighing 500 grammes, and follow it up twenty-four hours later with 0.5 c.cm. of a pure culture of diphtheria bacilli, sufficient to kill an unprotected animal in twenty-four hours. If this amount of serum protects the guinea-pig from the action of the bacilli, the serum is considered to be of sufficient strength.

Physiological Action.—Before considering the therapeutic action of the anti-toxic serum, it may be advisable to see what is known of its physiological action. As the effect of the serum has hitherto been chiefly studied in its relation to the toxin, comparatively little is known as to its action on the healthy animal. Arloing administered to guinea-pigs an amount of serum that would render animals of fifty times their weight immune, and repeated the injection of this amount every second day for twelve days. Young animals were selected, on account of their capacity for growth; and at the end of twelve days he found that they had not increased in weight to the same extent as some control animals. His inference was that there was a sensible retardation of development caused by the serum. Sidney Martin found that the effect on rabbits was practically nil; and Charters, of Glasgow, experimenting on guinea-pigs, states that no ill-effects, either local or general, were produced. At the Trousseau Hospital all children admitted under suspicion of diphtheria received an injection of 20 c.cm. of serum; and Variot found that in those who did not develop the disease a slight rise of temperature, varying from $\frac{1}{2}$ to 1° C., and some quickening of the heart's action and of the pulse followed. Mya had also the opportunity of observing the action of the serum on children not suffering from diphtheria, and he states that there was no noteworthy effect on the circulation or temperature. He, however, noted a slight increase in the quantity of urine, and in the amount of urea excreted, and he further observed an increase in the number of white

blood corpuscles, which he ascribes to the lymphagocytic action of the horse serum. His conclusion is that anti-toxic serum exercises no noxious action such as can be appreciated by present methods of examination.

Therapeutic Action.—It is apparent from what has been already said that the principle on which anti-toxic serum has been developed into a therapeutic agent is a thoroughly scientific one, and further that the remedy is not toxic. In this latter respect it differs from tuberculin, which is an extract of the toxic products of the cultivation of tubercle bacilli. It is important also to distinguish it from vaccination, which implies treatment by modified micro-organisms. Anti-toxic serum is a drug as much as any other contained in the pharmacopœia. The results of the treatment of diphtheria by means of this remedy may be estimated by statistics or by clinical experience. Various statistics have been put forward from time to time, but the possibility of error is so evident that it will be better for the present to depend on the clinical results. The almost universal opinion of those who have had the most experience of the remedy is in its favour. It is said that on the second day, sometimes even on the first day of administration, there is a sudden fall of temperature—that is, in cases where some temperature exists—but should the case be a very severe one, the fall is more gradual. At the same time, the false membrane ceases to spread, and by the second or third day it has begun to soften and be thrown off; the bacilli also gradually disappear from the membrane, and may be absent altogether after the third or fifth day. This remarkable fact may be accounted for by supposing that the cells rapidly regain their activity, and so are enabled to throw off the foreign matter as soon as they are relieved from the paralyzing influence of the toxin. These changes are associated with a slower and more regular pulse and a marked improvement in the general condition of the patient. In regard to tracheotomy, the necessity of operating is frequently obviated, even in cases that seem to demand it, by the use of the serum; and when the operation has to be performed, not only is a fatal result less frequent, but the tube can often be removed in from twelve to twenty-four hours. This doubtless is owing to the effect on the membrane already referred to. On these grounds, Bokai, of Buda Pesth, Von Ranke, of Munich, Roux, of Paris, and Baginsky, of Berlin, strongly advocate intubation in place of tracheotomy if something has to be done to relieve obstruction. It thus appears that the

whole clinical aspect of the disease is changed ; and this result can almost invariably be obtained if the treatment be begun early enough. Hence the necessity of an early bacteriological diagnosis. In cases where the disease has advanced sufficiently to set up nerve lesions, the serum can only be expected to prevent further mischief—not to undo the actually existing lesions. As regards the other secondary symptoms, albuminuria, &c., they are said to be less frequent and less serious ; but it is probable that these are also affected beneficially in proportion to the early application of the remedy. So much for diphtheria as a pure disease ; but we have seen that there are various complications depending on the association with the specific bacilli of streptococci, staphylococci and other micro-organisms. The full significance of this association requires to be further investigated ; but under certain conditions a "mixed infection" exists. The streptococci are able to penetrate into the living tissues, and may be found in the glands of the neck, the kidneys, spleen and other organs ; so that the specific diphtheria infection may be complicated with a septic infection, which in some cases may be the more fatal of the two conditions. Then, ordinary saprophytic micro-organisms which have obtained a footing on the debris may produce their toxins, and so give rise to a septicæmia. These points are of importance in estimating the results of the serum treatment of diphtheria, especially when the cases under observation are few in number ; because the anti-diphtheritic serum cannot be expected to have any effect on these foreign infections, or at the most only a very indirect effect, in so far as it may free the tissue cells from the influence of the diphtheria toxin, and so allow them to better withstand the septic or septicæmic condition. In the meantime such complications must be treated on general principles ; but it is satisfactory to know that in the near future there will be available a specific anti-toxic serum at least for the streptococci.

After-effects.—Various after-effects have been described as resulting from the therapeutic use of the anti-toxic serum, such as erythematous or urticarial eruptions and pains in the joints. They are said to occur in from 26 to 50 per cent. of the cases treated ; but it is not known how far they depend on the idiosyncrasy of the patient, on the constitution or contamination of the serum, or on the disease itself. So far the after-effects have been more unpleasant than dangerous ; and, as the anti-toxic serum is comparatively innocuous in itself, there is every reason to hope that with further experience

they may be avoidable altogether. To summarise the main points which concern effective treatment—(1) It is necessary to make sure that the disease to be treated is actually diphtheria, and this can only be done by a bacteriological examination. (2) The treatment must be begun early ; hence the necessity of an early diagnosis. (3) The dose must be sufficient to antagonise the amount of toxin in the system. (4) Local treatment should not be altogether neglected, although in many cases it seems scarcely required. (5) Septic and other complications must be taken into consideration.

Dose.—The anti-toxic serum is administered by subcutaneous injection into the loose tissue between the shoulders or over the flank, and the utmost care is required in securing asepsis by washing and disinfecting the skin, and boiling the syringe before and after use. The necessity of the dose being sufficient to antagonise the amount of toxin circulating in the body has already been insisted on ; but the difficulty of stating definitely what the dose should be is apparent when the variable constitution of the serum and the impossibility of estimating the amount of toxin in the body are considered. To meet the first part of the difficulty, the terms "normal serum" and "immunisation units" are taken advantage of. In the treatment of human diphtheria it is found that at least 500 immunisation units are necessary ; thus, if the serum be a normal serum, the dose would be 500 c.c.m. ; if it contains 50 units, the dose would be 10 c.c.m. ; if it contains 100 units, the dose would be 5 c.c.m. Hence, the necessity of all serum having its strength stated. But even with the same serum, the same dose is not used by all. Hauger, who prepares the serum sent out by the Brit. Inst. of Prev. Med. recommends a dose of 10 c.c.m. for both children and adults. Washburn, using the same serum at the London Fever Hospital, gives 20 c.c.m. as the initial dose, followed by 10 c.c.m. in twenty-four hours if required. Caiger, at the South Western, gives 20 c.c.m. three times a day, and narrates a case where a boy received 215 c.c.m. in three days with satisfactory results ; he insists that no harm follows large doses, and that discredit is brought on the treatment by the use of inadequate doses.

Prophylactic Action.—So far the serum has been considered as a curative agent, and it has been chiefly used as such ; but that it has a prophylactic value as well is evident from the experiments on animals already referred to. It has also been shown how Allen was able to differentiate the two actions, and to produce a serum with a relatively high immunising power

by treating the horse with injections of living cultures instead of toxins. With the serum as ordinarily prepared, several instances are on record where its prophylactic value has been taken advantage of; the more important perhaps being those recorded by Behring and Ehrlich, and by Hermann Biggs, of New York. Their experience led them to the conclusion that 150 units, or one-fourth the curative dose, was necessary to obtain sufficient protection; that after a dose of 60 units the disease, if contracted, would be mild; and that a full curative dose of 600 units was advisable, should the infection be of a virulent type. Biggs gave some remarkable statistics at the recent meeting of the British Medical Association in London, and claims that it has been possible to completely stamp out diphtheria in four great institutions for children in which the disease was prevailing in epidemic form by the employment of antitoxic serum as a prophylactic. He gave doses of 200 units, except in the case of very young children, who received 120 to 150 units. These instances are sufficient to indicate a wider application of the serum, especially if it can be prepared on the lines suggested by Klein—an application which may be equally as important as its therapeutic action, more particularly in the case of hospitals, schools and other institutions.

System for Carrying Out Bacteriological Examinations.—Having now completed our review of the natural history of diphtheria, the scientific basis of the serum treatment, the preparation, the physiological and therapeutic and prophylactic action of the remedy itself, it remains only to indicate the system usually adopted to facilitate the bacteriological diagnosis of the disease. It has been pointed out that it is essential to effective treatment to establish an early and an accurate diagnosis, and that this can only be done by the aid of bacteriology. This may be readily effected in hospitals provided with the necessary equipment; but, in the case of the general practitioner, there is neither the time nor the means to do it for himself. Hence the necessity of adopting some system whereby the various processes can be carried out on his behalf; and not only on his behalf, but on behalf of the public health, by facilitating early isolation of doubtful cases. The system which has been adopted in several cities of the United States, and is being gradually followed in many other places, is as follows:—A central laboratory is established where the work can be carried out. There are then prepared one set of sterilised test-tubes containing sterile blood serum or glycerine-

agar, and another set containing a sterilised swab of cotton wool on a soft steel rod in each tube. A box containing one of each set is sent out to any medical practitioner who may apply for it; and all the latter is required to do is to rub the swab lightly over the suspected throat, and then rub the infected swab over the surface of the nutrient medium in the other tube. The swab is then returned to its own tube; and both tubes being replaced in the box, they are sent on to the laboratory as soon as possible by post, under proper precautions, or, if not permitted, then by hand. The manipulation is a comparatively easy matter, the main point to attend to being to avoid injuring the surface of the nutrient medium, and to avoid contamination. Sometimes the test-tube containing the swab is sent out alone, and in this case the swab is simply returned to the tube after it has been rubbed over the throat, the further proceedings being confined to the laboratory; but there is some danger of the swab becoming dry during transit, and if the distance from the laboratory is considerable, a rubber cap should be placed over the mouth of the tube. Hamilton, of Aberdeen, recommends the use of a goat's hair brush, instead of a cotton wool swab, and he sends this out in a tube by itself; while Klein prefers a piece of membrane (when it exists) to be detached by means of a platinum wire, and forwarded in a test-tube. It is of great importance to carefully label the tubes, giving date, name of patient, age, day of disease, &c., along with signature of sender. As soon as the tubes arrive at the laboratory the cultivations are placed in the incubator at 37°C., and coverglass preparations are made at once from the swabs. In some instances examination of the latter under the microscope enables a diagnosis to be made at once, and nothing else need be done; but in others it is necessary to proceed with the cultivation, and then it requires from 24 to 48 hours before a diagnosis can be established. Sometimes a second set of tubes may have to be sent out, if the first give a negative result, and the medical attendant still is of opinion that the case in question is diphtheria. In addition to establishing the diagnosis of the disease such a system is of value in determining when a convalescent patient may leave hospital or a child return to school; and Hermann Biggs further recommends its application in the examination of throats of healthy persons who have been exposed to infection with the view of securing isolation or prophylactic treatment, if the specific bacilli are found.

It is evident from the foregoing remarks

that the public health would gain as much as the medical profession, were such a system to be established, and it opens up the question whether the initiative does not lie with the State. Failing, however, an immediate solution of the question, I may mention in concluding this paper that I propose to utilise the small laboratory at the Children's Hospital for the examination of throat cases in that institution, and, with the consent of the Board of Management, I shall be glad to undertake (so far as I have time at my disposal) the examination of cases for those members of this association who may desire it, and thus initiate the system as a temporary measure on a small scale.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE usual monthly meeting of the Branch was held at the Royal Society's Rooms on Friday, 25th October, 1895. Present—Dr. E. J. Jenkins (President), Drs. Knaggs, Mullins, Crago, Jamieson, Fiaschi, Todd, Macdonald Gill, Carruthers, O'Hara, Wilkinson, Tidswell, Lillie, Spencer, Bennet, G. A. Marshall, Collins, Morgan Martin, Kennie, Worrall, MacSwinney, Abbott, Chisholm, J. A. Dick, McDonagh, Armstrong, Binney, Pope, Flynn, McCulloch, Clay, Hetherington, Dixon, Neill, Clubbe, S. Hughes. Visitor: Dr. Veech. The minutes of the previous meeting were read and confirmed.

The PRESIDENT announced the election of Dr. A. E. Woodforde, of Glen Innes, and Dr. W. Cleaver Woods, of Albury.

The following letter from the Registrar of the Sydney University, with reference to the Weber-Parkes prize, was read:—

"University of Sydney,
"October 9th, 1895.

"Dear Sir,—I have been directed by the Senate to inform you of a communication which has been received from the Royal College of Physicians in London, announcing an open competition to members of the medical profession in all countries for the Weber-Parkes prize of one hundred and fifty guineas. This prize is awarded triennially to the writer of the best essay upon some subject connected with the etiology, prevention, pathology, or treatment of tuberculosis, especially with reference to pulmonary consumption in man.

"The first award under this foundation will be made in 1897, and the adjudicators have selected as the subject of the essay for that occasion, 'The Means, Prophylactic or Curative, deemed by the author to have value in the Control of Tuberculosis, especial regard being had to their application to Human Tuberculosis.'

"I may mention that the Royal College of Physicians sent only two printed copies of the regulations, one of which is posted in the Medical School, the other being retained in my office for reference. I shall be happy to send you more detailed information, if you require it.

"Yours faithfully,
"H. K. BAILING,
"Registrar.

"E. T. THRING, Esq., M.B.,
"N.S.W. Branch British Medical Association,
"225 Macquarie-street, Sydney."

Letter from the Hon. Secretary of the Brisbane Branch B.M.A., with regard to a resolution passed at a meeting of the Branch held on 15th August, with reference to a case of leprosy.

Dr. THRING proposed,—“That the question be referred to Council to be dealt with.”

Seconded by Dr. MULLINS.

After discussion by Drs. Wilkinson, Knaggs, and Tidswell, the resolution was carried.

Dr. BENNET exhibited a patient suffering from Lichen planus, and read his notes upon the case.

Dr. FIASCHI said the members were very much indebted to Dr. Bennet for presenting this case of Lichen planus. The very best plates and the best textbooks on dermatology did not give anything like an adequate conception of skin diseases.

The PRESIDENT stated that Dr. Graham had written to say that he regretted that he could not be at the meeting to initiate the discussion on the Midwifery Nurses Bill; but as there was a good deal of interest manifested in the Bill he (Dr. Jenkins) would ask the Hon. Secretary to read the Bill through, so that members who had not had an opportunity of reading it might get an idea of the provisions, and thus be enabled to discuss it.

The HON. SECRETARY (Dr. Thring) read the Midwifery Nurses' Bill of 1895.

Dr. THRING said he regretted Dr. Graham was not able to be present, but as the matter was of much importance it would be well to discuss the Bill. The first question was—Was a bill necessary at the present time; should it not be allowed to remain over until a Medical Bill had been passed? To his (Dr. Thring's) mind, the time was not opportune. There could be no doubt there were many women who act as midwives who were not at all fitted for the work; but would the Bill remedy this evil?

The Bill was then discussed in a very warm and energetic manner by those present, Drs. Mullins, McCulloch, Crago, Neill, Worrall, and Wilkinson taking part. Finally, Dr. Wilkinson moved, in consideration of the lateness of the hour, “that the debate be adjourned, and next Friday evening be fixed for its resumption,” which resolution was carried.

AN adjourned general meeting of the Branch was held on Friday, 1st November, 1895, at the Royal Society's Rooms. Dr. E. J. Jenkins (President) in the chair.

The PRESIDENT stated that, as this was an adjourned meeting to consider the Midwifery Nurses Bill, he would call upon Dr. Wilkinson, who had moved the adjournment, to continue the discussion.

Dr. WILKINSON opened the discussion, and moved:—
“1. That, in the opinion of this Branch of the British Medical Association, the bill introduced by Dr. Graham in the Legislative Assembly on September 11th, 1895, is likely to increase the dangers arising from the incompetency of midwives, and should therefore in the public interest be strenuously opposed.
2. That the Council be instructed to ask Dr. Graham to withdraw his Bill; also, if necessary, the Council to use every effort to prevent the Bill becoming law.”

Dr. McDONAGH seconded the resolution.

Dr. FIASCHI proposed the following amendment:—
“That, in the opinion of the Branch of the B.M.A., Dr. Graham's expressed desire to receive suggestions from the Branch as regards his Bill on midwifery nurses be granted, and that each article of the Bill be discussed, and that the result of such discussion be forwarded to Dr. Graham.”

Dr. THOMAS seconded the amendment.

Dr. GRAHAM explained the nature of the bill and the reasons which prompted him to introduce it into Parliament, and expressed his willingness to receive any suggestions from the meeting.

Drs. Mullins, Edwards, Worrall, and Wilkinson also addressed the meeting. The amendment was lost by 25 votes to 23—the President and Secretary not voting—and the original motion carried on the voices, with very few dissentients. We regret that pressure on our space prevents our inserting a fuller report of the discussion.

PROCEEDINGS OF OTHER SOCIETIES.

MEDICAL SOCIETY OF QUEENSLAND.

THE 106th meeting of the Society was held on October 8th, 1895, in the Society's rooms. Present: Dr. Hill (President), Drs. Gibson, Booth, Ashworth, Love, Ure, Little, Orr, Lauterer, Byrne, and Turner. Visitors: Dr. Hinchcliffe, of Bendigo, and Dr. Woinarski, of Melbourne.

Dr. TURNER showed some ancylostoma worms that had been passed during life. He remarked that, since Dr. Gibson and himself recognised the disease in two children in the Children's Hospital in 1892, there had been fifteen cases in that institution. No cases had been observed in Brisbane children, but the disease occurred in the coast district between Brisbane and Gympie. In the North of Queensland the disease appeared to be developing into a very serious scourge. He considered it probable that the disease might have been introduced by Asiatic immigrants, and that it was spread by drinking water contaminated by faecal matter. Of the cases in the Children's Hospital two had died, which was sufficient to show that the infection was a serious one. His object in referring to it was more particularly to indicate its curability under proper treatment. Under hygienic conditions, and the administration of iron and arsenic, the anæmia usually improved, but this was by no means to be regarded as a cure; such cases relapsed sooner or later. For the expulsion of the worms thymol had been used with success in several parts of the world. Its efficacy depended entirely on the method of administration. Moderate doses—for instance, five grains given three times a day—were utterly useless. In a boy aged seven, who had been ineffectually treated two years before, the following routine was followed:—For one day he was kept on strict milk diet, and an aperient administered. The next morning he was given four 10-grain doses of thymol at hourly intervals, being allowed only water to drink in the intervals. The milk diet was enforced till the evening, when the bowels were cleared out by a saline aperient. A week, and again two weeks later, the same routine was repeated, substituting 15-grain doses of thymol for four consecutive hours. No toxic symptoms were produced, and many worms were expelled. Since then his faeces had been frequently examined microscopically, but the characteristic ova could not be found. This showed that the number of worms in the bowel had been at least much reduced. It would be contrary to all our knowledge of intestinal worms to suppose that the ancylostoma multiplied *in situ* if a few chanced to remain behind. He would emphasise the statement that symptomatic improvement was fallacious, and that the only real test of recovery was the disappearance of the characteristic ova from the faeces.

Dr. GIBSON remarked that he was glad this matter had been brought before the Society, as he, in conjunction with Dr. Turner, had been previously sceptical as to the efficacy of thymol. The ova were found in the faeces in such extraordinary numbers in these cases that their absence on several examinations was significant. He referred to a case in a male adult, previously reported to the Society, in which innumerable worms were found *post-mortem* clinging to the mucous membrane of the *caecula conniventes*. This case had been diagnosed as "pernicious anæmia." The blood examined during life had shown few or no misshapen corpuscles, although the patient was extremely anæmic. This had led him to suspect that the condition might be due to ancylostoma, and the microscopic examination of a minute particle of the faeces placed this at once beyond any doubt.

Dr. ASHWORTH showed 200 worms which had been collected from the motions of a child aged four years, under the treatment of Dr. Love, after the administration of four doses of 7½ grains of thymol at hourly intervals. He had traced the development of the ova from the early segmentation stage to that in which an embryo worm was contained in the ovum. In a stool which had been kept several days he had observed similar worms, free and actively moving. He drew the attention of members to a specimen of the adult worm under the microscope.

Dr. LOVE said that the same child had been treated some months before with B naphthol, and discharged symptomatically cured; but its readmission showed that the cure was not complete. He had read of 20 grains of thymol having produced toxic symptoms in an adult, and this had previously prevented him from giving the drug in large doses.

Dr. HILL referred to Dr. Hogg's case, in which the worms were found *post-mortem* in a lunatic. This was the first case recorded in Australia. The disease appeared to be confined to the coast district.

Dr. WILTON LOVE read notes of a

CASE OF HEPATIC ABSCESS TREATED BY INCISION, WITH RECOVERY.

By WILTON LOVE, M.B., CH.M. ED.,
BRISBANE.

ARTHUR E—, aged four years, was admitted to the Hospital for Sick Children on May 27th last. He had been ailing for about a month, with no very definite history of pain or fever; no history of dysentery or diarrhoea, but on leading questions being put, a vague history of a fall was elicited, when he struck the right side of his chest against a chair. On admission, patient was a small, puny-looking boy, much emaciated, with a temperature of 104° (4 p.m.). Examination revealed little beyond some increase of liver dulness below the costal margin, with some localised tenderness below ribs in right mammary line. His condition remained stationary for a week after admission, the temperature falling to normal each morning, and going up from 3 p.m. to 9 p.m. to 102°, 103°, 104°, and on one occasion to 104·8°, but

without rigors. Bowels occasionally loose, motions containing bile. Some swelling and more localised tenderness began gradually to appear below the costal margin in the mammary line. On 8th June a fine exploring needle was introduced into the swelling, and a little thick pus withdrawn. Owing to want of opportunity, incision was postponed till next day. A grave mistake, as my experience has shown me that where an internal tumour containing fluid—be it pus, bile, hydatid, or hydronephrotic fluid—is punctured by an exploring needle, operation should be performed forthwith, if possible. After the puncture patient vomited for two hours continually, and complained of pain in the abdomen, while the temperature the next day did not show the usual morning fall, but remained above 103°. Next day an incision was made over the most prominent part of the swelling, and the liver sutured securely to the abdominal parietes. An incision was made through about $\frac{3}{4}$ inch of liver tissue before pus was reached. The abscess cavity was the size of a hen's egg, and contained no trace of hydatid membrane, and microscopic examination showed no hooklets. Cultures of the pus, made by Dr. Turner, showed nothing but staphylococci. The cavity was mopped out and irrigated with bichloride solution. The boy was very much collapsed after the operation, and only rallied with difficulty. The temperature fell next day, and remained normal for four days, when the evening rise again appeared, and continued for nearly 10 weeks, when it fell gradually to normal, the boy meantime gradually gaining flesh. The drainage tube was left out on September 5th, and the boy left Hospital on the 8th. He rapidly gained weight and strength, and could hardly be recognised as the same patient who had been so emaciated three months before. Patient exhibited. The case is interesting as abscess of the liver is very uncommon in children in Brisbane, this being the first case in 10 years' admissions to the Children's Hospital. The history showed a probability of the abscess being due to injury, which gave an apparent hopeless case a more favourable aspect. The continued rise of temperature after evacuation of the abscess made us fear there were other foci of suppuration in the liver or other internal organs, but no physical signs of multiple abscesses could be found, though carefully searched for.

Dr. TURNER said that the pus from this abscess yielded a pure culture of staphylococcus aureus. It did not contain amebae.

Dr. HILL remarked on the rarity of these cases in children of such tender years. He believed, however, that in this tropical climate cases of febrile diseases due to disturbance of the liver were not uncommon, but at present our knowledge of these affections was somewhat obscure.

Dr. LAUTERER then read his paper, "Chemical and Physiological Notes on Native and Acclimatised Mydriatic Plants of Australia."

CHEMICAL AND PHYSIOLOGICAL NOTES ON NATIVE AND ACCLIMATISED MYDRIATIC PLANTS OF QUEENSLAND.

By JOS. LAUTERER, M.D.,
SOUTH BRISBANE.

THE chemical investigations on tropeines, anhydrotropeines, and scopoleines by Liebermann, Ladenburg, Hesse, and Merck are still proceeding; and, as all the text-books are very far behind the present state of knowledge, I have the courage to give a few preliminary remarks, to fix a starting point from which new researches on mydriatic alkaloids must be carried on.

1846, Anderson isolated from bone oil an alkaloid (C_8H_8N), named by him "pyridine." This was found to unite with one or more atoms of hydrogen. Pyridine united with four atoms of H is tetra-hydropyridine. Now, if an inspissated decoction of any part of *Atropa Belladonna* be saturated with baryta and kept at a temperature between 60 and 80° C. for some hours a vegetable alkaloid is obtained, called "tropine," and derived from tetrahydropyridine through substitution of one H by ethylhydroxyl, and of another H by methyl. ($C_8H_{15}NO$).

This alkaloid tropine unites with acids under elimination of water, forming higher alkaloids, called "tropeines" by Ladenburg. The isomeric bases atropine and hyoscyamine ($C_{17}H_{23}NO_3$) (mandragorine and Merck's pseudo-hyoscyamine?) are natural tropeines, where tropine is combined with phenylhydroxypropionic acid, known by the name of "tropic acid."

Homatropine, a base not so poisonous as atropine, but a quicker mydriatic, is an artificial tropeine, where tropine is united with mandelic acid, produced by boiling the oil of bitter almonds with hydrochloric acid.

Benzoyltropein, a powerful mydriatic, is another artificial tropeine, like salicyltropeine and lactyltropeine, both of which do not act on the iris at all.

If the infusions from *Hyoscyamus* or *Scopolia atropoides* or *Duboisia myoporoides* or (according to Schütte, also from) *Datura Stramonium* be saturated with baryta and kept at a temperature

of 60° to 80° C. for some hours the same alkaloid, tropine, might be formed, but there will always be present another alkaloid, named pseudotropine by Ladenburg, and scopoline by Merck ($C_8H_{11}NO_3$, Oscine, Hesse). Sometimes, as in the case of Duboisia and Scopolia, the scopoline is exclusively present in the baryta decoction.

This alkaloid unites with acids under elimination of water, forming higher alkaloids, called "pseudotropeines" by Ladenburg, and "scopoleines" by Merck.

A natural scopoleine is the scopolamine $C_{17}H_{21}NO_4$, called also hyoscine, where the scopoleine is united to phenylhydroxypropionic acid (called tropic acid.) The scopolamine or hyoscine is a powerful mydriatic, five times stronger than atropine and hyoscyamine, and of a much quicker action.

Some artificial scopoleines (acetyl —, benzoyl —, cinnamylscopoleine) have been prepared only last year by Merck.

Natural tropeines and scopoleines are very likely contained only in solanaceous plants, as the "benzoylpseudotropine" (Liebermann's) found in coca leaves does not seem to be identical with Merck's benzoyl scopoleine and Hesse's benzoyl oscine.

Atropa belladonna L. (deadly nightshade) contains :

Atropine alone in the ripe berries, and in the leaves if the plant was cultivated.

The root contains hyoscyamine alone.

The leaves of the wild plant, as well as the other parts of every deadly nightshade, contain atropine and hyoscyamine mixed.

Datura Stramonium L. (Thornapple) contains atropine and hyoscyamine mixed, and, according to Schutte, a small quantity of scopolamine.

Mandragora vernalis L. (Mandrake) contains mandragorine, isomeric with atropine and hyoscyamine, but not yet thoroughly investigated.

Hyoscyamus albus L., *H. niger* L., *Scopolia atropoides* L., and *Scopolia japonica* contain hyoscyamine and scopolamine, *Scopolia carniolica* contains hyoscyamine in the leaves and scopolamine in the root.

Duboisia myoporoides contains hyoscyamine in the old leaves and twigs, and scopolamine in the fresh young leaves.

Duboisia Leichhardtii was found by me to contain mostly scopolamine.

Brugmansia arborea Mill and *Brugmansia Knightii* (*Datura cornigera* Hook), both native trees of South America, but growing here in gardens, contain hyoscyamine ($\frac{2}{3}$) and atropine ($\frac{1}{3}$).

Certainly, the mydriatic action of the

tropeines and scopoleines is of the highest importance. It was already known by Galenus that local application of "mandragora" and "hyoscyamus" produces dilatation of the pupils. Dr. Ray noticed the same fact in 1686 on application of a *Belladonna* leaf to an ulcer of the eye, and Doederlein (1790) saw the same effect produced by a *Stramonium* leaf. Himley (1800) found the mydriatic powers of *Hyoscyamus*; and the German chemist Runge, the discoverer of the anilin colours, used this physiological test first for detecting the mydriatic principles in cases of poisoning. Dr. Jos. Bancroft, the late lamented member of our Society, discovered in 1877 the mydriatic action of *Duboisia myoporoides*, and to him the introduction of *Duboisia* into medicine was due. The active principle of this plant was first described under the name of Duboisine, in Wittstein's "Organic Constituents of Plants," edited by Baron Mueller, but it was erroneously characterised as "volatile, and probably identical with piturine." Gerrard isolated it from the bark under the name of "duboisine," and gave reactions which agree altogether with those of scopolamine. Ladenburg (1879) reported hyoscyamine as the chief principle of *Duboisia myoporoides*, but later on only scopolamine (Merck, identical with hyoscine, Ladenburg's) was found in the commercial duboisine. Besides this, Merck discovered (1892) small quantities of a new isomer of atropine in *Duboisia* leaves, which he called "pseudohyoscyamine." As there is nothing mentioned in the newest literature about the assay of the *Duboisia* leaves and the percentage of the alkaloids contained in them in different seasons and in different ages of the plant, and as even the nature of the alkaloid is not yet stated unquestionably, I started some investigations some months ago, the results of which will be given directly.

The following methods were adopted :—

(1) For the identification of the alkaloids of *Duboisia*. Out of a strong decoction of the leaves the alkaloids are precipitated by iodine in iodide of potassium. The amorphous greenish precipitate is filtered off, washed well on the filter with solution of iodide of potassium, and then dissolved by a watery solution of sodium thiosulphate. From this solution the alkaloids are shaken out by chloroform after the addition of ammonia. To the alkaloids, obtained by evaporation on a watchglass, twenty drops of a 2 per cent. solution of mercuric chloride in proof spirit are added. If only scopolamine (which is an uncrystallisable resinous substance) is present, no coloration is produced at all.

(Gerrard's test.) If the alkaloid (is crystallised and) turns yellow, it is hyoscyamine. A pale yellow colour indicates a mixture of hyoscyamine and scopolamine. The mixed alkaloids can be sublimated between two watchglasses. The scopolamine melts at a low temperature (55°), and goes over first as oily drops; the hyoscyamine melts at 108.5° C., and goes over (not without some decomposition) as radiating needles. A saturated solution of bromium in hydrobromic acid throws all the hyoscyamine out of the mixture with scopolamine in the form of a yellow amorphous precipitate, which gets crystalline in a short time, showing, under the microscope, a peculiar picture of lanceolate crystals in flowery groups.

(2) For the identification of the hyoscyamine and atropine in the leaves of Brugmansia, the leaves are macerated in cold water, the solution is concentrated at a moderate heat, sodium carbonate and benzene is added, and the whole is well shaken. The benzene is taken off and shaken out with dilute sulphuric acid. Out of this the alkaloids are taken up by chloroform after addition of sodium carbonate, petroleum spirit is added, from which on slow evaporation of the chloroform the atropine crystallises out. The hyoscyamine stays in the solution, and is obtained after evaporation of the petroleum spirit.

(3) For the assay of the alkaloids it has merely been found necessary to precipitate them by a known quantity of tannic acid, to dry and weigh the precipitate, and to deduct from this weight the tannic acid used. The result is not absolutely correct, as a part of the tannates gets dissolved, but it comes very near to the truth.

I found in this way the leaves of Duboisia myoporoides, at the time when the flowers start to bud, to be richest in alkaloids, and to contain 65 per cent. of water and 0.30 per cent. of alkaloids. Dry leaves then contain 0.97 per cent. of alkaloids, being much stronger than Belladonna leaves. In the winter time a much smaller quantity, as low as 0.03, is present.

Duboisia Leichhardtii is still richer in alkaloids than D. myoporoides. There is mostly amorphous scopolamine present in the Duboisias, and only a small amount of hyoscyamine.

Brugmansia leaves contain less alkaloids (between 0.3 and 0.4 per cent.). The greatest part of the mixed Brugmansia alkaloids consists of hyoscyamine $\frac{2}{3}$, the rest of atropine. The leaves are richest in the hot summer-time, as I found some years ago.

As an average, 1 part of alkaloids is equal to 650 of radix Hyocyami, 600 of semina Daturae,

550 radix Daturae and folia Hyocyami, 500 folia Daturae, 300 folia Brugmansiae, 150 fol. Belladonnae, 130 fol. Duboisiae.

Only the half of a millionth part of a gram of atropine is wanted, according to Squibb, to produce mydriasis in less than an hour's time.

The commercial ophthalmic discs prepared with Scopolamine (Hyoscine hydrochlor.) contain $\frac{1}{800}$ grain (0.0001, = one-tenth of a milligram) of the alkaloid suspended in gelatine. The same amount is contained in about one grain of leaves of Hyoscyamus, and in a little less of the leaves of Duboisia. If we soak the powdered leaves in a little water we can prepare a good mydriatic in less than five minutes.

The price of the alkaloid prepared by Merck from Duboisia is 18s. 6d. for 15 grains of the crystallized scopolamine sulphate, and 7s. 6d. for 15 grains of the uncrystallized substance.

As the iris of a dead fish is dilated by the mydriatic poisons, mydriatics cannot be due only to the paralysis of the oculomotorius. It is of great importance for doctor and patient to use the smallest quantity of mydriatics for dilating the pupil, as the mydriatic will be as perfect by a small amount, and as it, together with paralysis of the musculus ciliaris, will last for two or three days if the dosis were too strong.

There are some other mydriatics to be mentioned to complete my paper. Brieger found a ptomaine as efficient as atropine. The cryptopin, one of the opium bases, and the cocaine, an isomer of scopolamine, are mydriatics. Cytisine, from Cytisus Laburnum, and also the volatile alkaloids sparteine and coniine, have mydriatic properties. Hydrocyanic acid and some glucosides, like digitalis, veratrine, and gelseminine, complete the list of mydriatics. Solanine is not a mydriatic; Nicotine and piturine have a mydriatic action in the first stage, and produce myosis in the last stage of poisoning.

For internal use I would recommend the scopolamine, as well as the other mydriatics, only for some special cases. It is a good narcotic and sedative in central disturbances, especially in maniacal delirium. In nearly all cases the effect on excitable patients, and even on raging lunatics, is sleep-producing and calming. In some spasms, like those of the muscles of the bronchial tree (asthma), of the uterus, and of the bladder, good effects might be produced by the scopoleines and tropeines. Dr. Jos. Bancroft used the tincture of Duboisia myoporoides, as he told me, with success for gastralgia. Scopolamine seems to increase the action on the heart, and does not affect the respiration. The

single doses are: 1 milligram of hyoscine sulphas (to $\frac{1}{15}$ grain in acute mania) 2 milligrams of atropine and hyoscamine, half a grain of Hyoscyamus leaves, $\frac{1}{4}$ grain of Belladonna leaves, and less (3 grains) of Duboisia leaves.

Dr. LITTLE said that our knowledge of the medicinal properties of the flora of this continent was pre-eminently indebted to the labours of two men—the late Dr. Bancroft, and the reader of the present paper. His only experience in the internal administration of these alkaloids was in a case of violent mania, in which the hypodermic injection of gr. $\frac{1}{2}$ of hyoscamine caused a most curious condition of muscular helplessness, which was followed by sleep. The patient recovered.

Dr. GIBSON complimented Dr. Lanterer on his able and interesting paper. He had observed, when using solid atropine discs, that the section of the iris nearest to the disc was the first to dilate. This appeared conclusive evidence that the drug acted locally upon the dilator fibres of the iris.

Dr. LOVE said that the text-books were in a very confused condition with regard to these alkaloids. Hyoscine and hyoscamine were even pronounced identical, though it was well known to clinicians that the former was much the more powerful drug. He related a case of male hysteria with convulsive movements—opisthotonus, emprosthotonus, &c.—in which the administration of choloform had only a temporary effect in restraining the movements. The only treatment found effectual was the hypodermic injection of one, or at most two doses of gr. $\frac{1}{2}$ of hyoscine. Hyoscamine failed to produce the desired result.

Dr. HILL had heard the paper with great pleasure. In a case of acute mania he had found hyoscine ineffectual, but hyoscamine in a dose of gr. $\frac{1}{2}$ gave good results.

Dr. LOVE said some samples of hyoscine were perfectly inert.

MEDICAL SECTION OF ROYAL SOCIETY OF NEW SOUTH WALES.

THE last meeting of the year of the Medical Section of the Royal Society was held at the Society's Room on October 15th, at 8.15 p.m. The chair was taken by Dr. W. H. Goode, M.A., chairman of the section. The minutes of previous meeting were read and confirmed.

Dr. MACDONALD GILL exhibited a case of sporadic cretinism, and a case of Raynaud's Disease.

Dr. JAMIESON exhibited an infant suffering from congenital syphilis and supposed gummata in the sterno-mastoid.

PROFESSOR ANDERSON STUART gave a demonstration on his new form of artificial larynx, and exhibited the patient with the larynx *in situ*.

Dr. MILFORD exhibited two cases of old injury to the skull.

Dr. JAMIESON read a paper on some cases illustrating the effects of syphilis on the central nervous system.

Owing to the lateness of the hour the remaining business was postponed.

FOR SALE.—An *Archer Operating Chair*, in good condition. Apply to Mr. Bruck, 13 Castlereagh Street, Sydney.

NOTICES.

All communications intended for publication may be addressed "The Editor, Australasian Medical Gazette, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

The Australasian Medical Gazette and the British Medical Journal are supplied to all Financial Members of the New South Wales, South Australian, and Victorian Branches Free of Cost.

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New South Wales, Dr. Crago, 34 College Street Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

SPECIAL NOTICE.—ORIGINAL ARTICLES FOR INSERTION IN THIS "GAZETTE" SHOULD REACH THE EDITOR ON THE 3RD, OTHER COMMUNICATIONS NOT LATER THAN THE 7TH, AND CORRECTED PROOFS ON THE 12TH OF EACH MONTH. FAILING THIS, THE EDITOR WILL NOT BE RESPONSIBLE FOR NON-INSERTION OR PRINTERS' ERRORS. VERY LENGTHY COMMUNICATIONS WILL ONLY BE INSERTED WHEN SPACE PERMITS.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, NOVEMBER 20, 1895.

EDITORIALS.

THE SYDNEY CLERKS' AND WAREHOUSEMEN'S BENEFIT ASSOCIATION.

WE have before us the prospectus and rules of this benefit society, which is registered under the Friendly Societies Act of 1873 as a specially-authorised society, under the patronage of his Excellency the Lieutenant-Governor, Sir Frederick M. Darley, with an influential body of office-holders and a board of directors selected from the leading mercantile and business firms in Sydney.

We will watch with curious interest the development and progress of this new project.

The aims and rules of the association are distinctly prejudicial to the interests of the Medical Profession generally.

We regret to see such a distinguished member of the community—our popular Lieutenant-Governor and Chief Justice—figuring as patron

to such a combination for "sweating" the medical profession. He, probably, would realise the very equivocal position which he has been solicited to occupy were the association to add to its benefits legal advice and conveyancing, with the services of barristers as specialists thrown in!

The association proposes to provide its members with medical attendance, medicine, and funeral expenses at a cheap rate—for a sum varying from three shillings to four shillings and sixpence a month, according to age at entrance. A bid is made for members of other Friendly Societies by offering to afford them facilities for obtaining fresh engagements when out of employment and relief in special cases of sickness. Medical attendance on members' wives and families (the latter without limit as to number) can be obtained on payment of a slightly-increased rate. It is proposed also to secure similarly cheap services of specialists in the eye and ear, which suggests in the near future the evolution of a scheme for obtaining specialists in other branches on similar terms. Reviewing the whole scheme, the provision for funerals appears to us to be a wise precaution, considering the possible status and ability of such members of the medical profession who would be willing to accept the small annual monetary margin left to pay for medical attendance and medicines when the percentage required for other benefits, including funerals, had become exhausted.

In conclusion, we summarise the methods by which this association threatens to become detrimental to the interests of the Medical Profession:—

1. There is an absence of any wage limit as regards membership.
2. No medical examination of candidates for membership is required.
3. Consultations between medical officers are to be held without extra fee, and no provision is made for fees for operations.
4. No provision is made for fees for attendance on cases of midwifery.
5. There is nothing to prevent a member, once an employee, from retaining his membership and privileges when he becomes an employer.
6. That members of the association do not belong to the class entitled to receive medical attendance from a benefit society.

We are pleased to note that the profession is moving in this matter, and, at a meeting of the Council of the Western Medical Association the following resolution was passed:—

"That, in the opinion of this meeting, the proposals of the Sydney Clerks' and Ware-

housemen's Benefit Association are objectionable to the profession. The meeting therefore requests that the New South Wales Branch of the British Medical Association take the initiative in this matter in order to test the feeling of the profession at large, and with the view of taking united action."

WANTED—A MEDICAL ACT.

WHILE an attempt is being made to give a legal status to midwives, and grant them the hallmark of competency by registering them, the Medical Bill for New South Wales remains *in statu quo*.

The opponents to a medical act for this colony attempt to justify their opposition on the plea that such a measure would be class legislation got up for the protection of the medical profession, and would create a trade-unionism for increasing the influence and emoluments of qualified medical practitioners. It is strange that no such arguments have been used against the closely hedged-in privileges of the members of the legal profession, which totally excludes outsiders from trespassing upon their rights. The legal functionaries who construct the wording of deeds, or plead in courts of justice, must very properly be competent and legally qualified, for fear that they might through ignorance imperil the property or liberty of their clients; but the health and lives of those persons living in this colony are afforded no protection whatever against the unqualified and incompetent men or women calling themselves doctors—and appropriating to themselves bogus medical titles—who are allowed to ride roughshod throughout this country—flaunt their filthy advertisements in the press, and imperil the safety of the community by suggesting easy escapes from the results of immoral practices.

It is a disgrace to some sections of the press in this colony that such advertisements are inserted without let or hindrance, and somewhat paradoxical the lofty moral tone such papers assume in denouncing the dreadful crimes that occasionally shock the community, but which are in reality the outcome of these very advertisements appearing prominently in their pages.

The following extracts will give an illustration of the necessity for a Medical Act in the colony of New South Wales:—

THE STATUS OF UNQUALIFIED "DOCTORS" IN NEW SOUTH WALES.

UNDER the above heading, the *Sydney Daily Telegraph* of August 29 publishes the following article, which requires no comment from us:—

"ALBURY, Wednesday.—Matthew B. Wyatt, an unqualified medical practitioner, at the Small Debts Court to-day, proceeded to recover from E. Willing, railway employee, £9 for medical attendance. A defence was set up that Wyatt, not being a duly qualified doctor, could not recover, and also that in representing himself as qualified he had deceived the defendant, and was not entitled to a verdict. Wyatt submitted that, though known as 'Dr. Wyatt,' he had not represented himself as a duly qualified doctor, and contended that, there being no Medical Act in this colony, anybody could practise as a doctor, and recover for medical services rendered. The Bench commented upon the absence of legislation preventing quacks from practising. A verdict was given for the plaintiff for £3."

The next paragraph appeared in the *Daily Telegraph* of 25th October:—

AN UNQUALIFIED MEDICAL PRACTITIONER IN VICTORIA.

ALBURY, Thursday.—Wyatt, an unqualified medical practitioner, of Albury, was charged at Wodonga (Victoria) to-day with having represented himself as a qualified medical man and a member of a medical institute. The defendant denied the charge, but he was fined £10, with costs. The police took a note of the defendant's evidence that he had never represented himself as duly qualified, with a view of taking proceedings on a charge of perjury.

DR. GRAHAM AND THE AUSTRAL- ASIAN MEDICAL GAZETTE.

We have much pleasure in inserting Dr. Graham's disclaimer—that he did not make use of the words attributed to him in a report of a speech which appeared in the *Sydney Morning Herald* of 14th September, when he was advocating the claims of a certain institution in which he holds an official position, and upon which we commented in our last issue.

Notwithstanding Dr. Graham's protest that we should not have taken cognisance of an incorrect report appearing in the daily press, we consider that we were perfectly justified in the course we adopted. Dr. Graham admits that he took the precaution to supply one paper with the notes of his speech, shewing an effort on his part to make public his views; and, while we unhesitatingly accept his assurance that he did not see his misreported speech which we quoted, and which appeared in one of the leading and most influential papers in Australasia, it is gratification to us that we attracted his attention to an erroneous report of his remarks published broadcast through the colonies, which reflected as much upon his own reputation as upon the skill of his professional brethren, and thus afforded him an opportunity of setting right a grievous wrong inflicted upon all concerned.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

We wish to remind our readers that the fourth meeting of the Intercolonial Medical Congress of Australasia will be held at Dunedin, commencing on the 3rd February, 1896, and will last a week. As announced in page 379 of our issue of September, most elaborate arrangements have been made for the benefit of all members of the Congress. We have been requested to urge all members of the profession in these colonies to register without delay their names as members with the local secretaries, and also to intimate whether they intend to be present at the meeting. This visit will afford a splendid opportunity of inspecting, under the best auspices, the glorious scenery of New Zealand, in addition to becoming in touch with matters of professional interest which may be submitted to the meeting.

Reduced rates of passage will be granted by the Union Steamship Company of New Zealand to members. The railway authorities of New South Wales, Victoria, and Queensland will issue return tickets at single fares to members and their wives on their way to New Zealand. South Australia grants this concession to members only.

It is urgently requested that members should send in without delay the titles of such papers as they propose reading before the Congress. Every effort should be made by the members of the profession in these colonies that this Congress should be a success.

LETTERS TO THE EDITOR.

THE SERO-THERAPY OF CANCER.

(To the Editor of *The Australasian Medical Gazette*.)
Board of Health Offices,

127 Macquarie-street, Sydney, Oct. 10, 1895.

SIR,—I am directed by the President of the Board of Health to enclose a memorandum on the sero-therapy of cancer, presented for the information of the Board by the medical officer in charge of its laboratory (Dr. Tidswell). I am to say that, as the President considers the matter to be one of interest to the profession, it may be thought desirable to publish the paper in the *Australasian Medical Gazette* as a resumé of the present state of knowledge on the subject.

I am, Sir, Your obedient servant,
C. A. SIMMS, Acting Secretary.

Board of Health Offices,
127 Macquarie-street, Sydney, Sept. 9, 1895.
SERO-THERAPY OF CANCER.—PRELIMINARY
COMMUNICATION.

TO THE PRESIDENT—

SIR,—I have the honour to present for the information of the Board the following particulars on the above subject:—

As early as the seventeenth century the occurrence of erysipelas during the course of certain diseases was observed to produce a beneficial action on them. Mental diseases, neuralgia, typhus, acute rheumatism, syphilis, skin diseases, keloid, epitheliomata, carcinomata, lymphatic gland enlargements, &c., are said to have been partially or completely cured owing to an accidentally-acquired attack of erysipelas.

Ricord and Déprés appear to have been the first to deliberately employ erysipelas as a curative agent. They produced artificial erysipelas ("Erysipele Salutaire") for the cure of a phagadenic chancre.

W. Busch used erysipelas for the cure of a malignant neoplasm. He succeeded in getting his patient infected by placing her in bed with patients suffering from erysipelas. The attack produced a diminution in the tumour—a lympho-sarcoma of the neck—and all except a small portion disappeared. This small portion, however, subsequently enlarged again.

Fehleisen, who isolated the micro-organism of erysipelas ("Micrococcus Erysipelatos") treated malignant growths with pure cultures of this microbe. He scarified the skin over the tumour, and rubbed in the culture. Rigors and typical erysipelas followed. He reports the following cases:—

1. F., 58 years. Multiple fibro-sarcomata of the skin. The treatment had no definite effect on the tumours, and collapse was produced.

2. F., 49 years. Recurrent carcinoma of mamma: Tumour in scar and outlying nodules. The tumour disappeared, and had not recurred several months later.

3. F., 8 years. Intra-ocular sarcoma, recurring in a few weeks after excision of the eye. The whole of the orbital cavity was filled with a swelling which extended on to the forehead. Submaxillary glands enlarged. No diminution in the tumour occurred.

4. F., 52 years. Mammary carcinoma, ulcerating, size of two fists; bean-sized nodules in skin round tumour; axillary glands enlarged. Partial diminution was obtained.

5. F., 29 years. Lupus of face. Disappeared, except a few small nodules near nostrils, which were scraped out. No recurrence for two years.

6. F., 40 years. Recurrent mammary carcinoma; enlarged inoperable glands in axilla. There was practically no improvement.

The conditions resulting from inoculation—rigors, high fever, and collapse—were too serious for such a procedure as Fehleisen's to become popular. The results obtained were evidently considered not worth the risk, as the method fell into disuse.

During the past year or two the treatment of malignant disease by erysipelas has been revived in a modified form by Emmerich and Scholl in Germany, by Richet and Héricourt in France, and by W. Coley in America. The methods differ in detail in each case.

(a) *Method of Emmerich and Scholl.*

E. and S. prepare a serum from the blood of animals which they had previously injected with cultures of the erysipelas streptococcus, making use of the method now well known in connection with diphtheria and tetanus. The serum is injected into the cellular tissue

round the tumour in amounts which vary with the size of the growth and the patient's condition. They consider the action of the serum specific, probably more efficient on sarcomata and on younger growths. They state that neither pain nor fever is produced by the injections. The serum is difficult and expensive to prepare. They give the following details of cases treated by them:—

1. Recurrent carcinoma of mamma, infiltrating the whole infra-clavicular space; axillary glands enlarged: Under treatment, the mass disappeared, and the improvement was such that the patient could move her arm, and was able to leave the hospital.—(Note: Angerer, in whose clinic the above case was treated, admits the diminution in the growths, which, however, he thinks might have been due to the erysipelas which occurred, and not to the serum.)

2. Mammary carcinoma, recurrent: Under treatment, some improvement was obtained. The treatment, for some reason which is not stated, had to be suspended.—(Note: Angerer states that the subsequent history of this case was bad.)

3. Ulcerating mammary carcinoma; metastases: Under treatment, several of the masses became smaller, and the patient improved in general condition. No subsequent history.

4. Recurrent mammary carcinoma, with metastases in upper arm: Under treatment, growths in upper arm disappeared. No subsequent history.

5. Large, rapidly-growing carcinoma of breast; axillary glands enlarged: Under treatment, a rapid diminution in size occurred. No subsequent history.

6. Cancroid of face: Under treatment, great improvement resulted.

Freytmuth (Danzig) used Emmerich's serum in two cases:—

1. Epithelioma of mouth, recurrent, involving tongue and pharynx: Under treatment, the tumour appeared to undergo semi-fluid caseous degeneration. The patient died from exhaustion due to cachexia, twenty days after the treatment was commenced.

2. Recurrent sarcoma of lower jaw: Report incomplete.

Freytmuth calls attention to a contagious erysipelas which supervened in case 2. This was communicated from the patient to his wife, who nursed him.

P. Bruns (Tubingen) used Emmerich's serum in six cases. No diminution in the growths occurred; considerable respiratory and circulatory disturbances were produced, with rises of temperature proportionate to the amounts of serum injected.

Emmerich and Scholl, in reply to Bruns, state that not enough serum was given by him, and that the samples supplied to Bruns were amongst the first prepared by them, and perhaps imperfect. They have used larger amounts without unpleasant effects, and consider Bruns must have injected into the vessels of the tumour. They complain that Bruns omits to report a case in which a diminution in the growths occurred.

Angerer (Munich) maintained before the Munich Medical Society that Emmerich's serum was not curative. Emmerich had treated five cases in Angerer's clinic. Two were treated before operation. After removal of the growths no histological changes could be found. In the third case erysipelas supervened, and threatened the patient's life. Neither the erysipelas nor the injections had any effect on the tumour. The fourth and fifth cases were Nos. 1 and 2 of Emmerich and Scholl's report, and have already been commented upon. Zimmermann, at the same meeting, related a case in which diminution of the

growths had been obtained. An afebrile erysipelas was produced by the injections, which lasted two days.

(b) *Method of Richet and Héricourt.*

B. and H. prepared a serum from the blood of animals, into which the juice expressed from a sarcoma removed by operation had been injected. They treated two cases:—

1. Fibro-sarcoma, recurrent; size of a small orange: Under treatment, the tumour began to shrink, and finally became reduced to a small indurated plaque. The patient's general condition improved, and she gained flesh.

2. Cancer of stomach, forming an orange-sized mass in epigastrium of a man aged 44 years: Under treatment, there was general improvement, with diminution in the size of the tumour. The latter could not be felt by palpation fourteen days after treatment was commenced.

(c) *Method of Coley.*

Coley (New York Cancer Hospital) uses the toxins of erysipelas, either alone or in combination with those of B. Prodigiosus, and also the serum of erysipelas-treated animals. He obtained satisfactory results in the treatment of sarcomata, but doubtful success with carcinomata. Treated 44 cases—33 sarcomata, 8 carcinomata, and 3 other cases, either carcinoma or sarcoma.

Of these 5 were probably permanently cured, 9 showed marked improvement, 8 showed temporary improvement.

The following results are reported:—

1. Recurrent sarcoma of hand. Had been six times removed in four years. The last recurrence occurred in three weeks after operation. Frequently examined microscopically, and sarcomatous nature certain. At time of commencing treatment the growth was as large as a hen's egg, and the axillary glands were enlarged. The tumour diminished in size, and became necrotic; was scraped out. The ulcer cicatrised, the weight increased, and general condition improved. No recurrence six months later.

2. Tumour over right buttock diagnosed as osteo-sarcoma; inguinal glands enlarged. Under treatment the growth decreased in size, and became necrotic.

3. Spindled-celled sarcoma of left scapula and thoracic wall. Under treatment the tumour disappeared in four months, and there was no indication of recurrence after another four months.

4. Small sarcoma of sternum. Disappeared entirely under treatment.

5. Epithelioma of lower jaw, floor of mouth and tongue. Under treatment improved, but later became as bad as ever.

6. Tumour of abdominal wall; inoperable; microscopical examination showed it to be a sarcoma. Under treatment disappeared, and six months after commencement no evidence of it could be found.

7. Inoperable tumour of abdomen and pelvis. Exploratory incision revealed a growth seven inches in diameter attached to pelvis. A portion removed was found to be sarcomatous. Under treatment the tumour almost disappeared, and no increase was observed during several months.

8. Osteo-chondro-sarcoma of right ilium as large as a child's head, with enlarged inguinal glands. Under treatment the tumour became necrotic and sloughed; was incised and drained. Six months later no trace of the growth remained.

NOTE.—Kean (Philadelphia) found Coley's treatment fail time after time, and does not approve of it.

Herman Mynter (New York) reports the following case:—

F., 12 years. Abdominal tumour causing respiratory

distress, ascites, and dropsy of legs. Exploratory incision showed a large tumour involving parietal peritoneum, mesentery, pelvic organs, and cæcum. Microscopical examination of a portion excised showed it to be a sarcoma. The abdomen was closed and a drainage tube inserted. After injections the tumour decreased in size, and sloughs came away through the drainage tube. The tumour ultimately entirely disappeared, and the patient was restored to perfect health.

Répin (Paris?) obtained the following results with Erysipelas toxins:—

1. Subcutaneous cystic sarcoma at back of shoulder. Under treatment the tumour sloughed, and a line of demarcation formed. By microscopical examination it was found that the sarcomatous tissue extended beyond this line. The treatment was stopped, and the tumour increased rapidly, invaded the pleura, and speedily caused death.

2. Secondary cancerous disease of submaxillary glands. The injections produced lancinating pains, but no apparent modification of the tumour.

3. Secondary sarcoma of thigh. The injections failed to influence the disease in any way.

4. Enormous sarcoma of thoracic wall. The injections were without effect on the tumour, which soon caused death.

The injections sometimes produced rapid emaciation, rigors, and fever, notwithstanding which Répin considers his experiences such as to justify further researches, and is hopeful as to the future of the method.

It will be seen from the above resumé of the accounts to hand, that the idea of treating malignant neoplasms with Erysipelas is not a new one. In its evolution the method appears to have passed through the following stages:—

1. The observation that accidental attacks of Erysipelas cured certain diseases.

2. The exposure of patients to Erysipelas for curative purposes. (Busch.)

3. The inoculation of the Erysipelas organism. (Fehleisen.)

4. The injection of Erysipelas toxins. (Coley.)

5. The preparation of a curative serum. (Emmerich and Scholl, Coley.)

The distinctive character in the method of Richet and Héricourt of using a serum prepared by the injection of "cancer juice" instead of Erysipelas is especially noteworthy.

There has been a decided gain in method in the substitution of toxitherapy and serotherapy for inoculation, thereby giving the physician sufficient control over the treatment to permit of its use in cases otherwise incurable.

As regards efficiency, the advance is less certain, but already there is evidence that disease hitherto considered irremediable has been cured by the method, and its future is probably one of great promise.

In view of the possibility of the Board's desiring to take up the question, I would venture to point out that the method is still in the research stage. Any investigation would of necessity be of an experimental nature, and, perhaps, void of satisfactory results. The experiences of Bruns, Angerer, and Keen show that success is not certain. Emmerich hints at difficulties and expense.

Whether or not there is sufficient justification for incurring the responsibility involved the Board must decide.

I have the honor to be, Sir,
your obedient servant,
FRANK TIDSWELL.

LEPROSY CERTIFICATION IN QUEENSLAND.

(To the Editor of the Australasian Medical Gazette.)

SIR,—In the October issue of the *Gazette* there appears an account of the August meeting of the Queensland Branch of the British Medical Association, at which meeting a resolution was proposed by Dr. Lyons, and supported by Dr. Hirschfeld, to the effect "that, in the interests of the profession, a full and detailed account of the case of Molloy should be forwarded by this Branch to the Editor of the *British Medical Journal*, and also to the Editor of the *Australasian Medical Gazette*, for the purpose of obtaining an authoritative expression of opinion as to whether the subordination of a clinical diagnosis of leprosy to a purely bacteriological examination is conducive to the best interests of the profession, or calculated to raise it in the estimation of the public."

After discussion, an amendment was carried unanimously to the effect "that, whereas a bacteriological examination forms an important part of the medical examination of a suspected leper, it is necessary that such bacteriological examination should be conducted by, or carried out under the immediate supervision of a qualified medical practitioner;" and further, "that the proceedings of this meeting be forwarded to the parent Association and the sister branches in Australasia, desiring them to express an opinion on the decision of the Queensland Branch."

The report of this meeting furnishes a text for an editorial on "Leprosy Certification in Queensland," which is concluded with the opinion that "if the Leprosy Act is to be carried out in this manner it had better be repealed at once."

I regret that I was unable to be present at that meeting, and the following facts were then in my possession, and would doubtless have thrown a different light upon the subject.

To explain this, a short account of some of the earlier cases of leprosy in Queensland is necessary.

In December, 1891, a young man named Quigley was suspected by medical men in Rockhampton to be suffering from leprosy, and after examination was forwarded to Brisbane, where he was accommodated in a tent in the grounds of the Brisbane Hospital. A report was forwarded to the Colonial Secretary by Dr. Jackson, the Medical Superintendent, to the effect that Quigley had been carefully examined, and was found to be suffering from tubercular leprosy; but no bacteriological examination was made, though an honorary bacteriologist (Dr. Hirschfeld) had been appointed to the institution some time before. Quigley was thereupon transferred to the lazaret at Dunwich. In the *Telegraph* of February 23rd, 1892, a letter from a Dr. Sinnett, formerly of Molokai, was published, in which he stated that he had no hesitation in affirming that Quigley was not a leper, and that a mistake had been made. I thereupon saw the Under-Colonial Secretary, and suggested the propriety of having a bacteriological examination made. A request was consequently made by the Colonial Secretary that the proposed examination should be undertaken by the Medical Society of Queensland. This was not assented to by the Society, but a bacteriological examination was made by Drs. Thomson, Lockhart Gibson, T. L. Bancroft, and myself, when numerous leprosy bacilli were found, and a report was made "that the microscopic evidence supports the diagnosis arrived at as the result of the examinations to which Quigley had been previously submitted." The report concludes with the words, "At the same time we wish to record our opinion that the

microscopic evidence can only be taken as corroborative, and to state that our present knowledge would not justify an absolute diagnosis from microscopic evidence alone."

The caution embodied in this last sentence appears, however, to have been overridden by statements made by Dr. Hirschfeld in some subsequent cases from which the Colonial Secretary was forced to believe that if leprosy bacilli were not found, that the case was not one of leprosy. Dr. Hirschfeld was then a recent arrival from Germany, with the reputation of having been a pupil of Koch, and his name as a bacteriologist had been prominently brought before the public by numerous newspaper interviews on the subject of Koch's treatment of tuberculosis. Towards the end of 1892 Drs. McBurney and Lloyd, of Mackay, reported the existence of leprosy in a Kanaka "Kowee," who was thereupon forwarded to the lazaret at Friday Island. The Colonial Secretary, however, anxious that no stone should be left unturned to avoid mistake, directed that cover-glass preparations of serum should be forwarded from Friday Island to Dr. Hirschfeld, who reported that "the fact that specimens (of serum) taken from different parts and at different times, gave the identical negative result is quite sufficient to establish in this case that the patient is not suffering from leprosy." The man was thereupon discharged and set at liberty. No description of the clinical symptoms accompanied the report of Drs. McBurney and Lloyd on this case, so that Dr. Hirschfeld actually diagnosed the absence of leprosy in a man 1,000 miles away, whom he had never seen, without any clinical evidence, and merely on the strength of not finding bacilli in cover-glass specimens of serum prepared by someone else in accordance with directions given him.

Then came the celebrated case of the leper Wilde. This man was sent from Herberton to Brisbane for examination as a suspected leper in the end of 1892. He was accommodated in the grounds of the Brisbane Hospital, and was pronounced by the late Dr. Bancroft, Drs. Thomson and Taylor (all men of large experience), to be suffering from anæsthetic leprosy. Dr. Hirschfeld was requested by the Colonial Secretary to make a bacteriological examination. His report states that after a bacteriological examination he was convinced that there was "certainly not the slightest evidence of leprosy in this patient." In a supplementary letter Dr. Hirschfeld states, "the diagnosis of most infectious diseases, amongst them lepra, is made by the presence or absence of the bacterium causing the disease;" and again, after detailing the methods employed in staining the specimens of serum, he concludes: "The identical negative result of this investigation enabled me to arrive at the conclusion that the man Wilde was undoubtedly not suffering from leprosy." In spite of the fact that this patient had been pronounced to be suffering from anæsthetic leprosy by three capable and experienced medical men, no mention is made in Dr. Hirschfeld's report of the presence or absence of any of the clinical symptoms of that disease, such as anæsthetic areas, skin discolorations, thickened nerves, etc. So strong was the Colonial Secretary's belief in the infallibility of the bacteriological test, as insisted upon by Dr. Hirschfeld, that in spite of the protest of the Central Board of Health, Wilde was liberated. The sequel of this case is that in July, 1895, this man applied to be sent to the Benevolent Asylum at Dunwich, and upon examination by Drs. Byrnes and Lyons was found to be in an advanced stage of anæsthetic leprosy, and was forwarded to the lazaret at Dunwich.

In the face of the above evidence it is difficult to understand the effrontery which characterizes Dr. Hirschfeld's action in seconding Dr. Lyons' motion quoted above. From his own words he is condemned, for in the discussion he says, "The leprosy bacillus is absent in the peripheral lesions of the great majority of cases of nervous leprosy," and quotes authorities in support of his statement. If he has grown wiser since he made the above reports he should at least have had the honesty to admit the ignorance which led to his contradicting the diagnosis of men more experienced than himself, and to letting two lepers go free among the community.

Sufficient and incontrovertible evidence has, I think, been adduced by the above verbatim extracts to show that the Colonial Secretary was fully persuaded by Dr. Hirschfeld's reports that the presence of bacilli was essential to the diagnosis of leprosy. Throughout the Colonial Secretary has shown himself most anxious to eliminate any possibility of a mistake in diagnosis, and his action in regard to Molloy, as reported in the discussion and your editorial, is merely a further proof of this. After 12 months' stay in the lazaret Molloy was found to be so much improved in health, and as the cutaneous eruptions had faded almost entirely, the Colonial Secretary requested Mr. Pound, the Government Bacteriologist, while at Dunwich, to make a bacteriological examination. This was done, and Mr. Pound reported that no bacilli were found. He did not state that Molloy was free from leprosy, but that "if leprosy be present, it could only be the early cutaneous manifestations of nerve leprosy." Thereupon the Colonial Secretary transferred Molloy to Peel Island, which was duly constituted a lazaret, and reported the matter to the Central Board of Health, who advised that a further clinical examination be made. Mr. Tozer at once agreed to this, and requested Dr. Byrne to examine Molloy, at the same time extending a courteous invitation to be present to those gentlemen who had made the original examination. Surely the profession will agree with the Central Board of Health, who acknowledged that Mr. Tozer had acted with humanity and despatch in removing a convalescent case from further risk of infection through contact with tubercular cases in all stages of ulceration, especially as the marked improvement would naturally suggest either the possibility of a mistaken diagnosis or the hope that a cure had been effected. ("Both forms may recover.

In nodular cases this is a very rare exception, while it is the rule in the maculo-anæsthetic." Hansen and Looft's *Leprosy*, 1895, page 85).

With reference to the amended motion quoted above, it is sufficient to say that it is quite superfluous, as from my official position as Secretary to the Central Board of Health I am able to state that on no single occasion has Mr. Pound's bacteriological report on cases of suspected leprosy been deemed sufficient, as the clinical evidence of at least two medical men has always been required in addition by the Colonial Secretary.

Mr. Pound's qualification as an expert is founded upon far greater bacteriological experience in leprosy than is possessed by any medical man in Queensland, and the Colonial Secretary is well advised in seeking his assistance in addition to that of medical examiners. I trust that the explanation given above will furnish a key to any apparent irregularity in the certification of leprosy in Queensland, knowing as I do that every effort has been made in the past to render the lot of these unfortunates as tolerable as possible.

I am,

WILTON LOVE, M.B.

Wickham Terrace, Brisbane.

LEPROSY IN QUEENSLAND.

(To the Editor of the *Australasian Medical Gazette*.)

SIR,—It is astonishing to note by what slow steps the medical profession in Queensland is being seized of the facts, viz.:—

- 1st. That leprosy is not a rare disease in the colony.
- 2nd. That a bacteriological examination is superfluous.
- 3rd. That in some lepers the bacillus cannot be detected.

I remember in 1868 my father, the late Dr. Joseph Bancroft, endeavouring in vain to convince the medical men of the day that a patient, F. P., in the Brisbane Hospital was affected with tubercular leprosy, and several Polynesians, who suffered from sore toes and fingers, had anæsthetic leprosy. I do not think I am exaggerating when I say that since then I have seen a hundred cases of leprosy in the colony, chiefly anæsthetic.

In 1883, whilst attending classes in the Manchester Infirmary, an opportunity was given me of making sections of the tubercles taken from a leper, and staining the bacillus with magenta. The method is so simple that it might be learnt by anyone.

Serum sufficient for a microscopic examination can be obtained, without subjecting the patient to discomfort or pain, by the mere prick of a lancet. Wipe off the first drop of blood, and gently press the tubercle, when a little serum will exude; it does not matter if blood be mixed therewith. The staining can be done in two or three minutes. Hitherto, I have never seen ulceration follow the little operation.

It is absurd to call in the assistance of a bacteriologist to make such an examination; indeed, quite as absurd as to ask an analytical chemist to test urine for albumen.

In the report of the last meeting of the Queensland Branch of the B.M.A., published in the *Gazette*, I note that my friend Dr. Hirschfeld seems grieved because a certain patient M., diagnosed by him as affected with leprosy, had since been subjected to a bacteriological examination by Mr. Pound, who found no bacillus lepræ. Upon this negative evidence the Colonial Secretary (who administers the Leprosy Act) caused M. to be removed from the Stradbroke Island lazaret.

Dr. Hirschfeld can now picture the disgust of the whole profession in Brisbane, some years ago, when a certain patient, W., who had anæsthetic leprosy was liberated by the Colonial Secretary, and sent to his home in Herberton, with a purse of sovereigns as a sop for *wrongly* (!) having been certified by the members of the Central Board of Health and others to be so affected. This on the evidence alone of the same Dr. Hirschfeld, who had then had no experience of the disease. The doctor was commissioned by the Colonial Secretary to examine W. owing to his reputation as a bacteriologist, and having failed to detect the lepra bacillus he regarded the patient as otherwise affected.

A bacteriological examination is useful towards helping in doubtful cases to arrive at a diagnosis, and this seems to me to be its only use.

To avoid further blundering, would it not be a wise thing for the Queensland Government to appoint its Central Board of Health to decide as to whether or not any person said to be leprosy is or is not before his removal to the lazaret. This could be done at the ordinary meetings, and would entail no further expense to the colony?

Whether the segregation of lepers be beneficial to the community seems to be doubtful, but it is manifest

that segregation is of no benefit to the lepers themselves. It behoves, then, the community to behave in a kindly manner towards these unfortunate people. To me it seems sinful to place them on Stradbroke and Friday Islands, away from medical comforts, nurses, and friends. They are sick persons, and should be in hospitals—specially built for them, if you choose—not situated, however, in remote and inaccessible places, but in or near the cities.

Remedies have been found for diseases formerly regarded as incurable—syphilis, for instance. Why, then, should we cease in our endeavour to discover one for leprosy? Some drugs already are reputed to be of benefit. Why should the Queensland lepers be deprived of even these?—I am, Sir, &c.,

THOS. L. BANCROFT.

Burpengary, near Brisbane, November 8th, 1895.

THE MIDWIFERY NURSES' BILL.

(To the Editor of the *Australasian Medical Gazette*).

SIR,—The concluding paragraph of your Editorial on the "Midwifery Nurses' Bill," published in the last number of the *Gazette*, reflects upon me in a most unfair manner.

I never uttered the words which have been attributed to me, and on which you base your comments, and put in italics. Since reading your article I have looked through the four daily papers that published an account of the proceedings of the meeting in question; three of them contain no such reference as you complain of, and the fact that you took the account given by one paper more than that given by the others, without making any form of personal inquiry as to which was the correct one, is a course that I have a right to take exception to, and to feel some annoyance at.

I gave the notes of my speech to one of the reporters of a paper you do not quote from, and they certainly contained no such offensive remark. Another newspaper report was furnished by the editor of the paper himself, who was one of the speakers at the meeting, and who naturally heard all that was said. In his report there is no reference to the alleged insult.

I have further made inquiries of the different medical men who were present at the meeting, and they assure me that the words were never uttered.

What I did say in the course of my speech was that the members of the Honorary Medical Staff in connection with the Women's Dispensary in Hay-street were anxious that the instruction given to the nurses on the subject of midwifery and midwifery nursing should be as complete as possible, and in referring to the results of a recent examination, I mentioned the circumstance that one of the senior members of the profession—a gentleman in no way connected with the institution, and who for some years was the Examiner in Midwifery to the University—was asked to look over the papers and give his opinion on them. He said that the answers as such were just what he would have expected from a student passing his examination in the same subject. There is nothing to imply an insult to the profession in such an observation.

Your statement that I appeared at a meeting in the Town Hall to further the claims of a certain private dispensary is incorrect. The institution in question is a public one, controlled and managed by a committee of the public, and the fact that the Mayor of the city was there in his official capacity is a proof of this.

It was on reading your article that I first learned that the objectionable words had appeared in the daily press, and I regret that I should have been placed in a sinister and compromising attitude by the appearance of authenticity they receive from being published in the *Gazette* with your official sanction. At least the tone of your remarks is infelicitous, and their good taste a matter of some doubt.

In my professional and public life I think I have given reasonable proof of a jealous regard both for the dignity and honour of the profession.—I am, Sir, &c.,
JAMES GRAHAM, M.D.

ALLEGED DOG-EATERS IN SILESIA.

(To the Editor of the *Australasian Medical Gazette*).

SIR,—To my regret, I cannot quite follow Dr. Thompson's deductions in his letter in your last issue; but it appears to me that he really accepts his quotation from Hauptmann's play as a decisive proof of the dog-eating habits of the Silesians. Whereas, on the contrary, far from treating this celebrated dog murder as an everyday habit of the Silesian weaver (analogous, say, to the appearance of the regulation chop on the Australian breakfast table), the poet makes the incident the culminating point in a highly dramatic play, intending to show to what extreme steps prolonged want can lead even in a civilised country. And this is nothing new. All accounts of famine during an inundation, a siege, an Arctic expedition, etc., teach it. Therefore, why should not this particular poor weaver feel a craving for such an unusual fare during an unusually hungry hour? He has tasted no meat whatever (consequently, also, no dog's meat) for two years. That does not make him appear an *habitual* dog-eater. And the mere thought of the deed is such a moral shock to him that he cannot even kill the dog himself.

That unprejudiced poor people, even during ordinary times, occasionally feast on meat not usually exhibited in the meat-markets (dogs, cats, hedgehogs, shinglebacks, etc.) no one can reasonably doubt. If my memory does not deceive me, Sam Weller, for instance, boasts of being an expert in the preparation of cat's flesh; but for that reason one does not represent the English or the Londoners as a race habitually living on cats. Dog-eating, in all probability, occasionally occurs in Silesia, the same as it probably does in London or in Paris, but it is restricted to a very few in the million of inhabitants; and it still seems absurd to me to speak of it as an existing *habit* of the population, and to look upon it as an explanation of the frequent occurrence of hydatid disease. Anyhow, not one amongst the numerous natives of Silesia whom I could question on this point here in Sydney had ever heard a word about the alleged prevalence of this habit in their native province. If there were no other reasons, the question of expense alone would effectively prevent the *habitual* consumption of dog's flesh, for in Germany, where rabies is not infrequent, the keeping of dogs is everywhere subject to very heavy taxation. This, of course, does not affect the stray dog-eater, who—as he does in Hauptmann's play—invariably, I presume, steals his dog.

For those of your readers, however, who, with Dr. Thompson, believe that Hauptmann merely dramatises an every-day occurrence in the Silesian weaver's life, and who may not be so conversant with foreign literature, Dr. Thompson might in fairness have added that Hauptmann's famous play deals with a time lying exactly fifty years back.—Yours, &c.,

J. COLPE.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during September to every 1,000 of the population was 2'43, and of deaths 0'92. The deaths of children under five years of age during the month were 123, or 31'62 per cent. of the total, 85 being under the age of one year. Five deaths of child-bearing women took place during the month, or one death of a woman to every 206 births recorded.

The following examiners have been appointed to act with the professors and lecturers in the conduct of the forthcoming annual examinations in medicine at the Sydney University:—Anatomy, Dr. A. E. Mills; physiology, Dr. Sterling and Dr. MacLaurin; materia medica, Dr. A. Watson Munro; pathology, Dr. G. E. Bennie; surgery, Sir Alfred Roberts; medicine, Dr. Mackellar; medical jurisprudence, Dr. Ashburton Thompson; psychological medicine, Dr. F. Norton Manning; ophthalmic medicine, etc., Dr. A. Murray Oram; clinical medicine, Dr. P. Sydney Jones; clinical surgery, Dr. Fiaschi; midwifery, Dr. James Graham.

THOMAS GRANT LANGHORNE, M.B.C.S. Eng. 1885, L.R.C.P. Ed. 1886, who for the last three years practised at Redfern (Sydney), died at Mount Gambier (S.A.) on October 5, at the early age of 34.

THE death is announced of Mr. E. E. Sager, Secretary to the New South Wales Board of Health, at the early age of 36. Mr. Sager had been ailing for some months, and had to leave his official duties some time since. The end, which occurred on October 17, was sudden and unexpected, as Mr. Sager had been doing fairly well for some time past. The cause of death was Bright's disease.

DR. A. J. BRADY, Specialist for Diseases of the Ear and Throat, of Lyons' Terrace, Hyde Park, Sydney, returned from his trip to Europe by the R.M.S. "Rome." Dr. Brady was welcomed at a dinner given at the Australia Hotel, on October 30th, by his professional friends.

DR. THOS. W. BROWN, a Melbourne graduate, has commenced practice at Broken Hill.

DR. A. E. FITZPATRICK, late of Crookwell, has succeeded to the practice of the late Dr. T. G. Langhorne, at Redfern.

DR. G. T. HANKINS has left Randwick, and resumed practice at 267 Elizabeth-street, Hyde Park, Sydney.

DR. J. L. M. MACCREADIE, late of the P. A. Hospital, Sydney, has succeeded to Dr. B. Dick's practice at Gulgong.

DR. G. H. PHILLIPS, of Parramatta, has been appointed an Official Visitor to the Hospital for the Insane at Parramatta, in the place of Dr. Walter Brown, resigned.

DR. D. D. RUTLEDGE informs us that, though he has taken over the Hydropathic Institute in Liverpool-street, he will continue to practise at Waverley at the same address as hitherto.

DR. JOE. RYAN, formerly of Wollongong, has succeeded to Dr. G. H. Hogg's practice at Cooma.

DR. S. S. SHIRLOW has removed from Richmond to Charlestown, near Newcastle.

DR. WALTER SPENCER, of Enmore (Sydney), has been appointed Hon. Medical Officer to the Society for

the Prevention of Cruelty to Children, also Hon. Physician to the "Sydney Rescue Work Society."

BRIGADE SURGEON LT.-COL. WILLIAMS, P.M.A., has returned from his visit to Europe, and resumed duty.

NEW ZEALAND.

THE proportion of deaths registered during September to every 1,000 of the population was 1'66 for Auckland and suburbs, 1'19 for Wellington with suburbs, 0'92 for Christchurch and suburbs, and 0'82 for Dunedin and suburbs. The total births in these four boroughs during September amounted to 379, against 365 in August. The deaths in September were 196, to which males contributed 115 and females 81. Fifty-four of the deaths were of children under 5 years of age, being 27'55 per cent. of the whole number; 42 of these were under 1 year of age.

NEWS has been received of the death in England last month of Dr. Alexander Johnston, M.D. St. And. 1867, M.R.C.S. Eng. 1850, L.S.A. Lond. 1853, for many years Health Officer and Coroner at Wellington.

DR. G. PEAROE BALDWIN, formerly of Neutral Bay (Sydney), has been appointed Resident Medical Superintendent of the Auckland Hospital, at a salary of £500, and an allowance of £150 in lieu of residence. There were sixty-two applicants for the position.

DR. A. G. H. BUCKBY has removed from Hawera to Gisborne.

DR. A. T. PERKINS, of Patea (Taranaki), has left for England.

QUEENSLAND.

DR. LILIAN COOPER, of Brisbane, has been appointed a member of the hon. medical staff of the Hospital for Sick Children.

SOUTH AUSTRALIA.

SAMUEL HORNECK, L.R.C.S.I. 1884, L. et L. Mid. K.Q.C.P. Irel. 1885, J.P., of Morphett Vale, died on October 19th, at Miss Tibbitt's private hospital in Adelaide, at the early age of 35. The deceased gentleman was a son of the Rev. Horneck, Rector of Rathmanee, Co. Wexford, Ireland. He arrived in the colony nine years ago, and succeeded Dr. John Morier at Morphett Vale, where he practised for some years. He visited England last year, and returned about nine months ago, when he resumed practice, but illness compelled him to relinquish his work. He was extremely popular in the district where he practised, and much sorrow is felt at his untimely death.

DR. R. H. PERKS, late Medical Superintendent of the Adelaide Hospital, has been presented by the nursing staff of the institution with a camera, as a mark of their esteem.

TASMANIA.

To every 1,000 of the population of the two chief cities, the proportions of births registered during September were as follow:—For Hobart, 2'21; for Launceston, 2'47; all, 2'47; and of deaths, 1'63 for Hobart, and 0'82 for Launceston. The deaths registered in September in Hobart and Launceston numbered 78—42 males and 36 females; 20 deaths, or 25'64 per cent. of the whole, took place in public institutions. The deaths under five years of age numbered 12, or 15'88 per cent., of which eight were under one year of age.

DR. E. J. CHERTHAM has settled at Scottsdale.

Dr. J. DEANE has removed from New Norfolk to Sorell.

Dr. J. C. HOOD, on leaving Sorell, was tendered a farewell dinner by the magistrates of the district, and he was also presented by the ladies with a silver card-case and cigar-case, suitably inscribed.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during September to every 1,000 of the population was 30.71, and of deaths 15.22. Males contributed 51 per cent. and females 49 per cent. to the mortality of the month. Children under five years of age contributed 22 per cent. to that mortality, as against 30 per cent. in September, 1894. One hundred and thirty-three deaths, or 24 per cent. of the whole, took place in public institutions.

Dr. HERMANN JONASSON, M.D. Wurzb. 1846, M.D. Melb. 1864, Medical Officer of the Victorian Railways, and formerly an hon. physician of the Melbourne Hospital, died at his residence, 55 Collins-street, Melbourne, on the 11th October, aged 70 years. He had practised in Melbourne for the last 34 years.

THE death is announced of Frank Lane, L.S.A. Lond. 1884, M.R.C.S. Eng. et L.R.C.P. Lond. 1887, formerly of Mooroolbark.

Dr. JAMES McCONOCHIE, M.D. Glas. 1872, who practised at Ballarat, Nagambie, Yea, Alexandra, and other places in Victoria during the last ten years, was found dead in his bed at his residence at Alexandra on October 8th; he is supposed to have taken an overdose of chloral. He left a widow and family in England.

Dr. ROTHWELL ADAM has been appointed an examiner in obstetrics at the Melbourne University, in the place of Dr. Rowan, who is absent from the colony.

Dr. R. LEE BROWN has settled at Birregurra.

Dr. W. H. GAZE, late of Westport, N.Z., has taken up his residence at Armadale, near Melbourne.

Dr. R. H. GIBBS, late of Warracknabeal, has succeeded to Dr. Wells' practice at Sale.

Dr. T. J. RUDALL has been appointed a member of the Medical Board of Victoria, in the place of Dr. E. M. James, resigned.

Dr. W. SNOWBALL, of Carlton, has been appointed a Member of the Medical Board of Victoria, in the place of Dr. Jonasson, deceased.

WESTERN AUSTRALIA.

Dr. THOS. H. LOVEGROVE, late of Bunbury, has been appointed Principal Medical Officer and Superintendent of Vaccination in the place of Dr. A. R. Waylen, who has retired on a pension. The Government have also arranged that during the temporary absence from Perth of Dr. Lovegrove his duties will be discharged by Dr. H. F. Harvey.

Dr. ROBERT RAMSEY has been appointed Resident Medical Officer of the Murchison goldfield district, and Public Vaccinator of the urban and suburban districts of Cue, and the rural district of Murchison goldfield.

Dr. S. V. DUNCAN has been appointed to act as Resident Government Medical Officer at York, during the absence on leave of Dr. J. A. O'Meehan.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Harris, May Hannah, L.R.O.P. Edin. 1896; L.R.C.S. Edin. 1896; L.F.P.S. Glas. 1896.
McDonagh, Vincent Eustace John, L. et L. Mid. R.O.P. Irel. 1892; L. et L. Mid. R.C.S. Irel. 1892.
Setzke, Edgar Ferdinand, M.D. Univ. Greifswald, 1888; State Exam. Certif. Berlin, 1890.
Smyth, Sydney Richard, L.R.O.S. Irel. 1867; L. et L. Mid. K.Q.O.P. Irel. 1871.

NEW ZEALAND.

Fenwick, Percival Clennell, M.B. Lond. 1896, M.R.O.S. Eng., L.R.O.P. Lond. 1894.

TASMANIA.

Cheetham, Ernest James, L. et L. Mid. R.O.P. et R.O.S. Edin. 1889, L.F.P.S. Glas. 1889.
Clarke, Arthur Hopkins, M.R.O.S. Eng., L.R.O.P. Lond. 1894.

VICTORIA.

Brown, Robert Lee, L. et L. Mid. R.O.P. et R.C.S. Edin. 1893, L.F.P.S. Glas. 1893.
Woolrabe, Frederick William, L. et L. Mid. R.O.P. et R.O.S. Edin. 1893; L.F.P.S. Glas. 1893; F.R.O.S. Edin. 1894.
Gase, William Henry, L.S.A. Lond. 1877; L.R.O.P. Lond. 1878; M.R.O.S. Eng. 1878; M.D. Brussels 1878.
MacGillivuddy, Maurice Patrick, L. et L. Mid. R.O.P. et R.O.S. Edin. 1895; L.F.P.S. Glas. 1895.
Morton, Edward Reginald, L. et L. Mid. R.O.P. et R.O.S. Edin. 1891; D.P.H. 1891, F. 1893, R.O.S. Edin.; L.F.P.S. Glas. 1891; M.D. et Ch.M. Trin. Coll. Toronto 1890.
Laidlaw, David Fraser, M.B. et Ch.M. Edin. 1894.
Name restored to the Register:
No. 1,591—Charles Burke Gaffney, L. 1879, F. 1889, R.O.S. Irel.; L. et L. Mid. K.Q.O.P. Irel. 1881.

MEDICAL APPOINTMENTS.

Alexander, Lillian Helen, M.B., to be Public Vaccinator at Women's Hospital, Melbourne.
Dlok, James Adam, M.D., to be Vaccinator for the district of Sydney and suburbs.
Giles, Henry O'Halloran, L.R.O.P., to be Health Officer for Wyndham shire, Vic.
Hoggan, Bertram Brooks, L.R.O.P., to be Health Officer for Romsey shire, Vic.
McEniry, James Joseph, L.R.O.P., to be Health Officer for the shire of Charlton, Vic.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

HARWOOD.—On the 24th October, at Adamstown, Newcastle, the wife of Dr. A. J. Harwood, of a daughter.
O'CONNELL.—On the 26th September, at Adelaide, the wife of Dr. O'Connell, of a son.
SOMERS.—On the 11th October, at Mornington, Vic., the wife of J. L. Edgeworth Somers, L.R.O.S.I., of a son.
STONE.—On the 27th October, at Pambula, N.S.W., the wife of Dr. R. Bindon Stone, of a daughter.
SWIFT.—On the 19th September, at Adelaide, the wife of H. Swift, M.D., of a son.

DEATHS.

AITCHISON.—On the 7th October, at Albert Park, South Melbourne, Catherine, the wife of Alex. S. Aitchison, M.B., Ch.B., aged 31 years.
TAYLER.—On October 31st, at Balmain East, Harriett Campbell, wife of W. G. Tayler, M.R.O.S.E., aged 56.

REPORTED MORTALITY FOR THE MONTH OF SEPTEMBER, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	108,870	240	130	31	...	...	■	3	1	...	14	14	13	7	...	2
Suburbs	319,730	789	259	92	...	...	7	10	1	2	19	46	21	10	...	3
NEW ZEALAND.																	
Auckland & suburbs.	42,718	97	71	19	...	...	...	3	1	...	6	21	7	1	...	...
Christchurch "	42,211	93	■	9	...	...	...	...	...	...	2	2	5	3	...	...
Dunedin "	48,991	94	40	6	...	...	...	...	...	...	2	10	7	3	...	...
Wellington "	38,710	■	46	20	...	...	2	2	2	...	7	10	4	2	...	1
QUEENSLAND.																	
Brisbane	56,075	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AUSTRALIA.....	348,136	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	40,167	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																	
Hobart	36,201	80	59	10	...	...	3	3	...	...	3	■	...	1	1	1
Launceston	23,075	57	19	2	...	...	...	...	...	...	2	...	1	...	1	...
Country Districts	99,927	309	90	...	...	...	1	2	...	...	1	...	...	...	...	...
VICTORIA.																	
Melbourne	64,215	87	63	122	...	...	2	26	2	3	84	75	55	27	4	9
Suburbs	374,740	1021	■	
Ballarat and Suburbs	42,000
WESTERN AUSTRALIA*	32,072	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the quarter ending.

METEOROLOGICAL OBSERVATIONS FOR SEPTEMBER, 1895.

STATIONS.	THERMOMETER.				Mean Height of Barometer.	RAIN.	HIDTY.	Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.				
Adelaide—Lat. 34° 55' 33" S.; Long. 138° 56' E.....	...	...	...	...	...	...	...	...
Auckland—Lat. 36° 50' 1" S.; Long. 174° 49' 2" E.....	66	55	42	...	5.21	19	71	...
Brisbane—Lat. 27° 28' 3" S.; Long. 153° 16' 15" E.....	...	...	...	...	...	...	...	...
Christchurch—Lat. 43° 32' 16" S.; Long. 172° 38' 59" E.....	72.2	60.3	39.2	...	0.62	■	■	...
Dunedin—Lat. 45° 52' 11" S.; Long. 170° 31' 11" E.....	72	49.1	32	...	1.56	18	73	...
Hobart—Lat. 42° 53' 32" S.; Long. 147° 22' 20" E.....	...	...	...	...	...	...	...	...
Launceston—Lat. 41° 30' S.; Long. 147° 14' E.....	...	...	...	...	...	...	...	...
Melbourne—Lat. 37° 49' 54" S.; Long. 144° 58' 42" E.....	76.5	53.6	34.2	29.824	1.88	16	—	...
Perth—Lat. 31° 57' 10" S.; Long. 115° 52' 20" E.....	...	...	...	...	...	...	...	...
Sydney—Lat. 33° 51' 41" S.; Long. 151° 11' 49" E.....	33.8	60	43.9	29.979	3.64	12	60	...
Wellington—Lat. 41° 16' 25" S.; Long. 174° 47' 25" E.....	65	52.2	37	...	2.97	14	72	...

AUSTRALASIAN MEDICAL GAZETTE.

ORIGINAL ARTICLES.

SOME FURTHER NOTES ON INFLUENZA.

READ BEFORE THE MELBOURNE MEDICAL ASSO-
CIATION, OCTOBER 3RD, 1895.

BY J. W. SPRINGTHORPE, M.A., M.D. MELB.,
M.R.C.P. LOND., MELBOURNE.

THE present extensive prevalence of influenza suggests a review of our position and knowledge. For a fairly continuous account of Victorian influenza, I venture to refer the curious to my papers in *The Australian Medical Journal* for October, 1885, September, 1891, and March, 1892, and in the *Transactions of the Intercolonial Medical Congress*, Melbourne meeting, 1889. The epidemic outbreaks there mentioned have continued with much the same periodicity, and varying symptomatology right up to the present time, so that we have now experienced a sequence of influenzal epidemics extending over a period of ten years. The present outbreak, which has been probably the most wide-spread since 1890, has certainly been accompanied by unusual climatic conditions, which, however, I do not propose now to discuss; and, so far as my experience has gone, it has presented severe pulmonary complications in many, and an unusual prostration in a still larger number, the latter, however, probably more a personal than a necessary sequela.

The present paper deals rather with certain general considerations suggested by our experience up to date. It makes us feel medically small to still find English and Continental authorities dating the beginning of the modern pandemic to the outbreak reported by Cantlie in Hong-kong at the end of 1888, regardless of our record of its prevalence throughout Australasia and Polynesia since 1885. This antecedent invasion of the Southern Hemisphere will yet, however, have to be chronicled and accounted for in the future complete history of the subject.

That Pfeiffer's bacillus is the *causa causans* is now generally admitted. No doubt its identification requires special staining and preparation, and careful scrutiny with a high power. Still it is almost inexcusable for one now to remain in doubt as to whether a special case or outbreak is influenzal or not. And yet journals and practitioners still proclaim their doubts, and take every step except the necessary one of examining blood and secretions. Hence wide

diversities of opinion, much discussion, and little progress. *Fiat experimentum.*

But we are still in the dark as to the factor responsible for pandemicity, and even for extensive epidemicity. That the disease is contagious, at any rate within breathing distance, may, I think, be taken as proven; but I am still of opinion that its main spread is atmospheric, and know of cases and outbreaks that seem explicable upon no other hypothesis. There can be little doubt that invasion is (with the possible exception of the gastro-intestinal form) practically always through the medium of the air passages, and it is perhaps something more than a fanciful conception to presume that the point of serious, if not first, impact is the lacrymal duct, the nose, or the throat, according as there is running at the eyes, coryza, or throat irritation at the outset. There is still, however, no satisfactory reason for the general affection of the frontal sinuses, unless it be that volatile irritant gases are given off during the catarrhal stage. Susceptibility, again, seems more general than is the case with any other air-borne germ, and subsequent attacks are the rule rather than the exception. How many of the minor ones, however, are due to non-influenzal irritation of influenzally-damaged structures remains to be settled by prolonged bacteriological examination. The undoubted returns of epidemic outbreaks suggest that the germ must have some terrestrial nidus, and there is indeed some evidence that it, or the conditions under which it spreads, is inimical to the diphtheritic and typhoid bacilli. Successful attack, in my opinion, means a susceptibility of the naso-pharynx. How modified by, though not necessarily dependent upon, ordinary atmospheric conditions is this personal local vulnerability has been abundantly shown in this as in previous outbreaks. But who can explain the pandemicity? As starting-points for a universal modification of the naso-pharynx, I know of but two adequate agents—the gigantic eruption of Krakatoa, to whose possible influence I drew attention in 1891, and variations in ozone (*vide* Dr. Carstairs' paper, *Intercol. Med. Congress*, 1892). How, again, can we explain the final disappearance of influenza? We have practical experience that the disease may continue to break out in epidemic form and varying but severe type for at least ten years. Of course it is possible that modifications in the virulence of the germ, and even its external extinction may end in

such lessening of the number and severity of outbreaks as to warrant the statement that the disease has died out. Still there is, in my opinion, evidence that the extension of an acquired immunity is a factor of considerable importance. I know, indeed, of a number of cases which I have reason to believe have acquired an immunity even against the prostrating catarrh which is the mildest form of attack. Of course in most this immunity is a long while in coming—hence, perhaps, the continued recurrence of epidemic outbreaks.

The rapidity of onset, again, must have struck all observers. In many cases invasion is practically instantaneous. I have seen a number, verified afterwards as influenzal, which were so sudden as to be regarded as accidents. The simultaneous invasion of a large body of people, too, is a characteristic that can frequently be determined. The *modus operandi* also, must not be regarded as always the same. The two settled points are that in cases with pyrexia the bacilli with their toxins are circulating in the blood, and that the bacilli may be present in the secretions even when they are not found in the blood. It seems probable that in the localised specific catarrhs the germs confined to the mucous membranes, and that though, in the severe pyrexial cases, the irritoparalysing effects are mainly produced through the central nervous system, yet in many (both severe and localised) the peripheral branches also of the vagus, glossopharyngeal and sympathetic, are locally affected, and symptoms are produced reflexly, according to the table which I ventured to draw up in a Congress paper in 1889. It is to this local implication of the nervous system that I believe should be attributed, *inter alia*, the intractable nature of the catarrh, and the slow resolution of many of the complications.

The complications furnish a very fascinating study. There are reasons for believing that they occur in healthy persons mainly, if not entirely, as the result of neglect, or attempts to fight the disease without laying up. Of external conditions, season, and of internal, temperament, seem the most influential. Hence we find pulmonary complications most prevalent in the winter and spring, and gastro-intestinal in the summer and autumn, whilst it is the bronchitic, the nervous, and the hepatic that are affected in the chest, the nervous system, and the gastro-intestine respectively. There is a large volume of evidence also in favour of the popular belief that influenza picks out the weak spots with physiological accuracy. Thus, I have seen instances where it has brought on a recurrence of diabetes, epistaxis, peculiar

neuritis, dysmenorrhœa, insomnia, long-past nervous prostration, even the spinal troubles of an old spinal fracture. Indeed, for a person to go through a severe influenzal attack without any special local complication is almost as good a health certificate as the best medical examination.

The pulmonary complications of the present outbreak have been, in my experience, mainly pleuro-pneumonia, broncho-pneumonia, and pneumonia. As usual, all have been patchy, often insidious in onset, apt to remain stationary, and unduly resistant of treatment. It seems probable that the influenza bacillus, and not the pneumococcus, is the actual cause of the pneumonia in many cases. However this may be, there can be no question of the terrible part played by the influenza bacillus in providing a nidus for the tubercle bacillus and pus cocci. Some years back I myself counted up to 300 cases of pulmonary phthisis apparently originated by influenza. So serious indeed has been the mortality, and so independent the result of any hereditary value, that here, as elsewhere, life assurance companies have had to modify their tables, and very properly, in my opinion, admit without any loading lives where the family history included a victim to influenzal phthisis.

The gastro-intestinal complications still receive too little attention. With us temperament and climate combine to render them both frequent and important. As regards their origin, it remains unsettled whether they are produced by extension from the pharynx or by the local reception of germ-infected food. However originated, it is the hepatic whom they most trouble, owing, I believe, to the local secretions being most favourable to the germ in that class of people. Clinically, these cases are characterised either by a continued fever mistakable for typhoid, or by symptoms almost, if not entirely, indistinguishable from rheumatism. As regards the former, I have little to add to my remarks before the Congress in 1889, except that in at least six cases I have since proved, by bacteriological examination of the blood, what had previously been but a clinical suggestion. These cases, however, though regarded as puzzling and anomalous, are still generally classed as typhoidal, and the presence of sloughs or blood in the stools erroneously taken as verification of that diagnosis. I would therefore urge progressive members of the profession to attempt a differential diagnosis, and test the result in each case by examining the blood for the bacillus. As regards the clinical likeness between rheumatism and some forms of

influenza, our experience from 1885 to 1895 simply corroborates the 1847 record. Careful observation, however, enables us to differentiate. In some cases at least it is a multiple neuritis, and not a true rheumatism that is originated. In others, however, with actual polyarthritis as well as joint pains, it seems to be a true rheumatism; a satisfactory explanation in my opinion being such a change in the intestinal and hepatic secretions (due to the local catarrh) as permits of that alteration in the intestinal flora, which seems to be the initial factor in acute rheumatism.

The effects of influenza upon the nervous system would fill a volume in themselves. In so far as they have come within my own experience, I would refer you to the *A.M.J.* for September, 1890, and the *Transactions of the Medical Congress*, 1889, simply adding exophthalmic goitre and cerebral meningitis to the list there given. Of the cardiac phase of the disease, as evidenced by syncopal attacks, and variations in rate, regularity, and force of the pulse, I have borne witness ever since 1885, and to what I have already reported would add actual endocarditis, produced, apparently, by influenzal toxæmia.

Certain clinical points are, in my opinion, deserving of special notice:—

1. The great tendency to hæmorrhage. I believe that this is still insufficiently recognised by many. It is common to find cases wherein the source of the bleeding is the naso-pharynx diagnosed as cases of hæmoptysis. I have met with several such cases which had been classed even as acute hæmorrhagic phthisis. Bleeding from the bowel is similarly not uncommon in gastro-intestinal influenza, with, of course, typhoid fever as the diagnosis. Hæmaturia, also, has drawn away the attention from the cause influenza to the effect nephritis. Uterine hæmorrhage, again, is quite frequent. I have seen influenza start the catamenia afresh, bring the flow on prematurely, and start bleeding in early pregnancy, ending in some cases with abortion.

2. The temperature curve frequently rises as if pneumonia were coming on, but without any lung inflammation, though rapid breathing and paroxysmal dyspnoea (of vagal origin) suggest the complication. The sudden fall is often erroneously attributed to quinine, antipyrin, etc. In the gastro-intestinal forms we may have a curve like that of a continued fever gradually subsiding, and to some *proving the disease to be typhoid*. After sharp attacks, the temperature is generally characteristically subnormal, simply from thermo-toxic exhaustion, and without serious portent. It is quite

common, however, to find this seriously regarded and actively treated.

3. It is quite common to find the illness called by the name of one or more of the complications, and the antecedent influenzal factor overlooked or omitted. Thus I have seen, in hospital and outside, numerous cases of influenza diagnosed simply as congestion of the brain, liver, etc., nephritis, sub-acute rheumatism, neuralgia, bronchitis, broncho-pneumonia, pneumonia, even epidemic pneumonia, etc. Unfortunately, too, the error is apt to carry with it a difference in treatment, which is not always for the patient's good.

4. It is well also to be on the look-out against mistakes as well as omissions in diagnosis. Thus, it is not uncommon, and at first excusable, to mistake an influenzal apical pneumonia for a tubercular consolidation, the diagnosis being settled in case of doubt by finding the influenzal bacillus in the blood, and the absence of any reaction with tuberculin. I have had a number of such cases, and the relief given by the correct diagnosis is beyond expression. The sloughy mucous membrane of a bad influenzal throat, again, is frequently mistaken for diphtheria. The history of the case and surrounding circumstances are at times fairly conclusive, and in doubtful instances I have established the diagnosis by finding the influenzal bacillus present in secretions, or blood, and the diphtheritic absent from the former. How valueless negative evidence alone, however, may be gathered from a case in which no Loeffler's bacilli could be found in the throat, yet the patient soon after had local paralysis. The occasional presence again of a scarlatinal rash—as in one of our hospital nurses, and a child from a children's home—may lead to the belief that the case is one of scarlet fever. I have elsewhere mentioned cases in which undoubted influenza have been diagnosed as sunstroke, injury, ague, cancer of the stomach, etc. Lastly, the fact of sudden death, even in the early stages, being an influenzal possibility, is worth bearing in mind, and may at times account for fatalities otherwise almost inexplicable.

5. The possibility of a double infection must be remembered. That the influenza bacillus can have clinical relations with the pneumococcus, the tubercle bacillus and pyococci, is abundantly evident. I have met, also, with an interesting case in which a hospital sister went through an influenzal attack (verified by finding the bacillus in her blood) during the incubation period of a typhoid attack (of typical course, curve, symptoms, and with a characteristic

relapse). And in a recent fatal case, in which a nurse died with some symptoms of local blood poisoning, we found the influenza bacillus present in her blood. Unfortunately the lymph serum was not examined.

6. Lastly, I would emphasize the advisability of always examining the naso-pharynx, both during and after suspected influenza. The mucous membrane will be found typically, if slightly, inflamed, even when the patient denies any soreness of the throat. Far too often the headache, cough, and sputum are treated irrespective of this local irritability, and persist when they may be readily relieved. And, with increasing experience, I hold more firmly than ever that this local lesion is the starting point for many subsequent relapses, and that the placing of the naso-pharynx in a healthy condition is the main preventative agent in our power against fresh attacks.

As regards treatment, I have little fresh to add. I know of no actual preventative except it be an acquired immunity. In addition, however, to the general resisting value of sound health (which limits the disease, and possibly prevents complications) we have a great safeguard in a healthy naso-pharynx, and, in this respect, I still find chloride of ammonium inhalations invaluable, both preventatively and curatively. After invasion, the mucous membranes seem best treated by menthol inhalations and swab during the irritant stage, and by glycerine of tannic acid and nitrate of silver (40 grains to the ounce) during the ill-nourished and secretory stage. For the attack itself there is no specific, though there can be no question of the great value of quinine and strychnine as general tonics. Symptomatically, the headache and cough are frequently banished by inhalations and swabs, and, judiciously used, antipyrin is simply invaluable in reducing fever and giving ease and sleep. I have never seen anything but good from a few doses of 15 grains or under. Perhaps, in the hepatic and rheumatic, the salicylates are preferable. As an aperient tonic, something like the Ht. Mag. Sulph. Acid c Quin. Sulph. should be early resorted to, with or without out strychnine hypodermically, checking the paroxysmal neurotic cough with the Linctus Morphine, and treating the general status rather than the complication. Undoubtedly it is well to isolate the sick as much as possible, and, when sufficiently convalescent, a suitable change of air may be confidently entrusted to work all possible wonders in ending symptoms and hastening recovery.

EXHIBIT OF A CASE OF ACUTE, GENERAL LICHEN PLANUS.

Read before the New South Wales Branch B.M.A

BY F. A. BENNET, M.A., M.D., HONORARY PHYSICIAN TO THE SKIN DEPARTMENT, SYDNEY HOSPITAL.

I HAVE a patient here suffering from what I believe to be acute, general Lichen Planus—a rare form of rather a rare disease—the chronic localised form being by far the most common. This woman, aged 35, is married, and has several children, all healthy, the only noteworthy point in her history being that about thirteen years ago she contracted syphilis, for which she underwent treatment, and of which she has had no recurrence.

On examination, it will be found that she presents a dark-brown eruption nearly all over the body—the hands, feet, neck and face alone escaping—being most prominent on the outer aspect of the limbs and the lower third of the body. The rash is symmetrical, tends to run into groups, and sometimes, by aggregation and coalescence of the papules, forms patches with a slightly scaly surface.

The lesion consists entirely of papules, which, for the most part, are slightly raised, flat, shining, irregular in outline, angular, polygonal, etc., and many of them are umbilicated. Here and there are a few groups where the papules are conical, and present in the centre a horny peg—the papules, in fact, of Lichen Pilaris,—so that we have here a case of Lichen Planus associated, as is sometimes the case, with Lichen Pilaris.

Itching, at the outset, was very intense, although now to some extent it is modified by treatment.

With regard to diagnosis, there are only two affections at all likely to be confounded with this case, and the first which would naturally suggest itself would be eczema papulatum; but then the colour of the eruption would help us, as would also the shape and appearance of the papules here. Besides, in eczema, some of the papules would almost certainly undergo some further evolution and become vesicles, and at some part or other, in all likelihood, we would find a characteristic patch of eczema. Far more difficult to distinguish would be the small papular syphilide, which sometimes simulates very closely Lichen Planus. Here, again, the dark-brown colour of the Lichen, as compared with the characteristic raw-ham tint of the syphilide, would come to our aid. The umbilication would in all likelihood be absent from

the syphilide, as would also the tendency of the papules to run into groups. The uniformity of the lesion, too, would be of great diagnostic value as distinguished from the polymorphism which almost invariably characterises the syphilide.

VALUE OF VOLUMINOUS INTESTINAL ENEMATA OF WARM SALINE SOLUTION IN POST-PARTUM OR OTHER HÆMORRHAGE.

By JOHN P. McNEILL, M.D., OF BURWOOD, N.S.W.

I VENTURE to think this case of general interest, as the patient certainly came back from the hereafter in a most unexpected manner, and, so far as one man's opinion can be relied upon, from no other cause but the treatment below mentioned.

In cases of post-partum hæmorrhage the treatment by transfusion, or sterilized intravenous saline solutions, has long received well-merited attention.

I believe, however, that the value of voluminous intestinal enemata of warm water and salt in such cases is insufficiently appreciated, and that such treatment applies to military and other surgery, as well as to obstetric practice. But—to be effectual—the tube must penetrate the sigmoid flexure, and command the absorptive powers of the descending, transverse, and ascending colon; therefore a long tube must be used, and the injection pushed to tension limits.

The old pathological axiom that “powers of absorption are in inverse ratio to powers of pressure” comes into force in an astonishing manner in the case of a depleted arterial system, as I think the following case will illustrate.

And I really do not think that the absorptive capacity of the large intestine has been sufficiently recognised as an alternative (on the spur of the moment) to transfusion or intravenous injection.

A good many people join the majority every year from loss of blood—more in the battle of the bedroom than in that of the “tented field.” And, if it prove true, as my case seems to hint, that a long enema tube is a fair substitute for an expensive and difficult transfusion apparatus, a rather important departure in surgery has been made.

This, very briefly, is my case:—

Mrs. X., abortion, flooding, practically dead from hæmorrhage; respiration ceased; cardiac action reduced to faint muscular contractions, audible by stethoscope; no pulse anywhere;

unconsciousness absolute; body cold; power of deglutition, as well as sensation, completely gone.

Arterial system drained when called in. In fact, patient practically a dead woman. Chiefly for the sake of doing “something,” I poured the contents of the kitchen kettle into a large basin, cooled to tepid from the bedroom jug, to the volume of about from one to two gallons, tossed in a teaspoonful of salt from the cruet, and filled the large intestine to tension limits with long tube, which I happened to have attached to syringe in my bag. Removed fetus clots, &c., by rapid digital movement, and employed artificial respiration as for the drowned. I had also injected hypodermically both strychnine and ether, with no result whatever, so far as I could see.

After some fifteen or twenty minutes she began to breathe, was soon able to swallow a stimulant, and made an uninterrupted recovery.

I have no doubt whatever that the voluminous injection saved her, and, as evidence, I may state that none whatever of that large quantity of water was ever seen again. None was returned. In two days she had a “solid” evacuation, but all that gallon or so must have been absorbed into her circulation in a very short time, and, aided by artificial respiration, set her heart going again.

I think this an interesting case, as I have heard so many good men say they do not believe much in this course of treatment, and I have not been able to find any similar cases in print where the same result was obtained.

A CASE OF PSEUDO-HERMAPHRODISM.

By G. A. VAN SOMEREN, M.D. ED., ORANGE.

I WAS called upon, a little time ago, by two women, bringing with them a well-developed, full-time child, in regard to whose sex they desired me to express an opinion, which I had at first some little difficulty in doing. The condition of the parts was as follows:—On each side of the middle were a couple of folds which were identical in appearance to the labia majora, and running between them, from the pubic symphysis towards the anus, was a fleshy mass, which at first I thought might be an hypertrophied clitoris. It was fixed on its under surface all along, to the posterior end, where the distal end of the fleshy mass could be lifted up somewhat, when you would see that you stretched a sort of frenum, which was attached to the perineum beneath and above to what seemed to answer to the glans penis covered by

an adherent prepuce, the meatus being underneath the extreme end, and rather backwards. There were no testicles to be detected in either groin, or in what looked like labia majora. There was no vulvar orifice anywhere detectable. Anus was well formed, though small, and a space of about half an inch of perineum existed between the frenal fold and the anus. Micturition and defecation were natural and painless, to all appearances.

Dr. W. H. O'Neill, of Sydney, who saw the case, attempted to take a photograph of the condition, but the difficulties connected with the attempt were such that the result was a failure, so, for want of a better way, I would refer to some illustrations in Pozzi's "Treatise on Gynaecology," vol. iii, p. 456, where fig. 484 is the nearest approach to my case, save that the labial folds are by no means so extensive in extending so far down. Diagrammatically the condition was something in the style appended.

R.L.M., L.L.M., right and left labia majora. P., penis.
P.R., prepuce. M.U., meatus urinaris. A., anus. The frenum runs directly from meatus to perineal raphe.

I gave it as my opinion that sex of the child was a male, and directed it should be dressed and brought up as such, it being a cryptorchid with possible hypospadias.

Apologising for the shortcomings of the above description and representation, and believing a record of the case would be of general interest, I crave the indulgence of my readers in submitting it to them so inadequately.

I might add that Drs. Gordon Cribb and W. H. O'Neill both concur with me in the determination as to the sex of the child, both of them having examined the child.

I propose, in a few months, if I get the consent of the parents, to attempt to liberate the penis by dividing as far up as I can the frenum where it attaches the penis to the perineum. This may intensify the very slight degree of hypospadias now present, but I think a plastic operation will enable us to rectify that.

Orange, N.S.W., 12th Oct., 1895.

CLINICAL LECTURES ON HYDATID DISEASE.

BY ALFRED AUSTIN LONDON, M.D. LOND.,
LECTURER ON FORENSIC MEDICINE AND
ON CLINICAL MEDICINE IN THE UNIVERSITY OF ADELAIDE.

III.—THE ADVENTITIOUS SAC OF PULMONARY HYDATIDS.

Points of Difference from the Sac of a Liver Cyst
—Openings of the Bronchioles—Frequency
of Suppuration after Rupture of the Cyst
—Degeneration Rarely Seen—Hæmorrhage
of Frequent Occurrence—Sloughing Rare
—Speculations as to the Development of the
Embryo.

For several reasons we must confess that we are less familiar with the natural appearance of the adventitious sac of a pulmonary hydatid than of that of a hepatic cyst. In the first place, pulmonary hydatids are less frequently met with, the proportion being that of one case in the lung to five in the liver. Then again, during an operation we are only able to get a view of a very small area of the sac. Lung hydatids are prone to rupture comparatively early in their career, so that they are seldom seen intact in the *post-mortem* room. Moreover, the rupture of the cyst is seldom attended with an immediately fatal result, but is usually followed by suppuration of the sac, if the cyst be of any considerable size.

We have, however, no reason for supposing that the sac of a living lung hydatid differs essentially in its appearance or structure from the sac of a liver cyst. We believe it to be composed of the same condensed fibrous tissue, derived from the areolar tissue of the lung. Where the cyst abuts on the pleural cavity its sac is generally thin, and it is covered by serous membrane. When the cyst is embedded in the lung its sac is intimately connected with the surrounding lung tissue, and cannot be peeled off as a separate structure; its interior is smooth and shiny. The intra-pulmonary portion of the sac derives its apparently greater thickness (as compared with the pleural portion) from the collapse of the air cells which is caused by the pressure of the hydatid cyst. Whereas in the liver a hydatid cyst, by its pressure, causes atrophy and absorption of the parenchymatous cells, which are not regenerated after its removal, so that a puckered fibrous scar results; in the lung the removal of the cyst is followed by re-expansion of the compressed air cells in ordinary cases.

There is another difference to be noted

between the adventitious sacs of a liver and of a lung hydatid—the former is a closed cavity, but the latter has openings in it, owing to the non-obliteration of the bronchioles. The existence of these openings (or of at least one such opening) is proved clinically by the coughing up of hydatid fluid when a lung hydatid is aspirated or incised, and it is a serious source of risk both during operation and when accidental or spontaneous rupture of the hydatid cyst occurs. We have seen that liver hydatids are very liable to rupture into their sacs, and then to undergo retrogressive changes. The lung hydatid is equally, or perhaps more, prone to rupture into its adventitious sac, but as this sac is not a closed cavity it is impossible in most instances to prevent septic bacteria gaining access to its interior; hence retrogressive changes are the exception, and suppuration is the rule, with ruptured lung cysts, and although such cysts may live and attain to a huge size, still rupture is the event to be expected. In the second volume* of the late Dr. Davies Thomas† book are mentioned a few instances of degenerative changes in pulmonary hydatids in man, and Berthold's case of a dromedary is often quoted‡, in which the pulmonary hydatid was encased in a calcareous shell consisting of two layers, an outer one of phosphate, and an inner one of carbonate of lime. Perhaps another reason why we so seldom meet with degenerating or calcifying sacs in connection with lung hydatids is to be found in the great inherent vascularity of the tissue which forms the adventitious sac. This vascularity further explains why, after operations upon lung hydatids, sloughing of the sac is of such rare occurrence. Dr. Todd recently published§ a case in which large fibrous sloughs came away from the 5th to the 15th day after operation. He has informed me that the hydatid was a large one, and had been known to exist for some time, so that the sac may have undergone some degree of granular degeneration. Prof. Watson¶ thinks that the slough which comes away in such cases is only an exudation from the surface of the sac, but, even if this be the correct explanation, I think it is rare for such pseudo-fibrous sloughs to be met with.

One disadvantage of this vascularity of the adventitious sac is the frequency with which we encounter hæmorrhage from its surface. The slight hæmoptysis which is met with prior to the rupture of the cyst is attributed to congestion of the surrounding lung tissue, and this expla-

nation is probably correct, for a somewhat copious frothy sputum sometimes attends the presence of a large unruptured pulmonary cyst. More serious hæmorrhage may accompany the rupture of the cyst, whether it occur spontaneously or be effected by operation. Dr. R. Scott, of Ballarat, has recorded* a case where the hæmorrhage was of frequent occurrence, and sometimes considerable in amount, after spontaneous rupture of the pulmonary cyst had occurred. During an exploratory aspiration after suppuration had ensued, the hæmorrhage was alarming. Subsequently it was immediately fatal during the performance of a radical operation. At the *post-mortem* examination the hæmorrhage was found to proceed from "one of the pulmonary arteries" with which "the fibrous membrane lining the cyst wall is incorporated," and in the immediate neighbourhood of this patent artery a large bronchial tube opened into the cavity of the adventitious sac, with which it was likewise incorporated.

I have known hæmorrhage to threaten the life of the patient eight years after the original date of rupture of the cyst, when one would have judged from the absence of symptoms or of physical signs that the hydatid membrane had been completely expectorated. The hæmorrhage is not always arterial, for Habershon‡ once demonstrated its source to be a ruptured varix of a branch of the pulmonary vein on the wall of an old hydatid cavity.

I have said that rupture of the cyst with expectoration of the hydatid fluid is the event to be expected. Sometimes, if it be small, the cyst is expectorated at the same time§, or shortly after its rupture. The compressed lung then expands again, and primary adhesion of the collapsed walls of the adventitious sac must be presumed to occur, leaving little or no trace of its former occupation by a hydatid cyst.

If the cyst be retained after rupture, suppuration may be expected sooner or later. The smooth-lined cavity becomes a granulating surface, and may continue as such even after all the contained hydatid debris has been expectorated. In a case where I operated upon a patient, who was *in extremis*, I found at the *post-mortem* examination a cavity at the right apex which showed no signs of contraction, although quite empty. There were no pleural adhesions. It was the size of a small orange, and had not been recognised as a hydatid cavity *ante-mortem*, the symptoms and physical signs

*Pp. 43, 44.

†Leuckart's "Parasites of Man," English Translation, p. 651.

‡Intercolonial Quarterly Journal of Medicine and Surgery, vol. I, p. 359.

§Aust. Med. Gaz., p. 290, 1895.

*Aust. Med. Gaz., vol. 12 (1893), p. 142.

†Cyst here means adventitious sac.

‡Guy's Hospital Reports, vol. xvii., p. 374.

§Davies Thomas, vol. II., p. 44.

of a somewhat larger hydatid at the left apex overshadowing it. The absence of any sign of pleurisy was remarkable, seeing how little thickness of tissue there was between the pleural and the hydatid cavities, and considering that suppuration had been going on for probably two years. A tubercular cavity of that size and in that situation would almost assuredly have contracted dense adhesions. Constant suppuration of the cavity appears to cause permanent fibroid change in the adventitious sac, which prevents the re-expansion of the now carnified lung tissue. With drainage, however, the granulating cavity will usually close rapidly. A suppurating pulmonary hydatid, especially if situate at the apex, may simulate closely to a phthisical cavity, causing hectic fever, and finally death from exhaustion or from pyæmia.

The rupture of the adventitious sac on its pleural aspect may occur at the same time as the rupture of the cyst itself, and be due to the same cause, and various complications may then be expected, such as pneumo-thorax or pyothorax. Or, after suppuration has occurred, an abscess may burrow into the abdominal cavity, or ulceration may cause perforation of the pericardium or of the pleura.

A word as to the situation in which the hexacanth embryo settles when it reaches the lung, and the route by which it arrives there. If it reaches the lung, as Dr. Dougan Bird has suggested in his monograph*, *via* the air passages, we may suppose that the ovum is inhaled intact, and its shell digested by the warmth and moisture of the air-cells, aided by perhaps their mucous secretion. The embryo may then be content to develop in the terminal air-cell, and as it grew it would tend to compress the adjacent air-cells, but to expand the opening of its own particular bronchiole. Or the embryo might reach the lung *via* the portal and pulmonary veins. It is still possible that it might burrow into the cavity of an air-cell. If, on the other hand, it developed originally in a pulmonary blood-vessel or in the cellular tissue, it is difficult to account for the patency of the air-passage on the wall of the adventitious sac, which we know to be usual. On this point I may refer you to Prof. Watson's recent presidential address.†

IV. THE ADVENTITIOUS SAC IN OTHER SITUATIONS.

(a) The Spleen.

In the few cases of splenic hydatids which I

have seen I have been impressed with the great relative dangers attending, not only the presence of the parasite in this vascular organ, but also operations for its cure, these dangers being chiefly associated with the adventitious sac. In the living cyst I have met with very striking proof of the capacity of the sac for absorption of the supposed ptomaine*, and after operation there is danger of fatal hæmorrhage. It is quite possible that extirpation of the spleen may come to be recognised as the safest routine treatment for a splenic hydatid. Spontaneous degeneration does occur, and the sac may undergo an extreme degree of calcification, but, as in the liver, this does not necessarily imply an ultimate cure.

(b) The Kidney.

The conditions which obtain in hydatids cysts of this organ are very similar to those which obtain in the liver, but we must substitute for the bile the crystalloid substances of the urine. Suppuration of the sac occurs—retrograde changes are met with—rupture occurs, as a rule, into the pelvis of the kidney, and, exceptionally, in divers other directions. Hæmorrhage from the sac is rare, and death from exhaustion is more frequent, I fancy, than from pyæmia. Radical operations are indicated, and, in some cases, extirpation of the kidney may be desirable.†

(c) The Mesentery.

I need not describe the sac of the parasite in this situation, beyond mentioning that the cysts always appear to be between the layers of the mesentery, and that they occur frequently in vast numbers. As to the origin of multiple cysts, there is to my mind at present no satisfactory explanation‡.

PART V.—THE ABSENCE OF THE SAC IN CERTAIN SITUATIONS.

It has long been known that in certain situations hydatid cysts might be found which were quite destitute of any adventitious sac. Dr. Thomas stated§ that it was "often, indeed, generally, absent in the brain." Cases have been reported in which naked cysts have been found *post-mortem* in the peritoneal cavity, either quite free, or else attached by a band of lymph to the surface of some viscus. In other instances, I think, they have been found free in the pleural cavity. Free cysts have further been found in the cavities of the heart in rare

*Aust. Med. Gaz., June, 1887.

†Vide Dr. Gardner's article, *Intercolonial Quart. Jour. of Med. and Surg.*, Aug., '94.

‡Vide Watson, *Aust. Med. Gaz.*, 1895, p. 288.

§Davies Thomas, vol. ii., p. 89.

**On Hydatids of the Lungs," 2nd ed.

†Aust. Med. Gaz., p. 288, 1895.

instances. In all these cases there is no reason to suppose but that the cysts were those of living parasites. In all these situations, on the other hand, it is well known that a well-marked adventitious sac may be present. As regards the brain, I am disposed to think that it is only when the cyst is situate in a ventricle or in the sub-arachnoid space that the sac is absent. Certainly, in one recorded case,* where the cyst occupied the dilated 4th ventricle of the brain, no sac is described, but the portion which invaded the cerebellum was surrounded by a gelatinous capsule. Recently I saw an instance of a hydatid cyst which partly occupied a cavity outside the vertebral canal and partly was situate within the theca vertebralis. The intra-spinal portion was destitute of an adventitious sac, whereas there was a well-developed one around the extra-spinal portion. In the serous cavities, whether cranial, thoracic, or abdominal, it is conceivable that hydatid cysts are just as well able to absorb nourishment from the serous surface, if it be closely applied to the surface of the parasite, as from the most highly developed adventitious sac. Indeed, the latter may be looked upon merely as an artificially-developed serous cavity. Probably, too, it is immaterial to the parasite whether it has to derive its sustenance from the lymph of a serous cavity or from the serum of the blood, as in the case of cysts lying free in a cardiac cavity.

These facts, if correctly interpreted, seem to show that an adventitious sac is not an essential part of the hydatid cyst, but that what is essential is, that the cyst shall be situated so as to be able to derive nourishment from the fluids of the body. If its habitat happen to be, as in these rare instances, a serous cavity, or the interior of the heart, the conditions for its nourishment are fulfilled; if not, an artificial serous cavity develops in the cellular tissue of the viscus to supply these requirements.

HUXTABLE MEMORIAL FUND.

THE following have subscribed to the above since last notice:—Drs. P. T. Thane and W. Brown, senr., Mr. C. Frith, and Master Charlie Huxtable.

WM. H. CRAGO,
Hon. Treasurer.

NOTICE OF REMOVAL.—Mr. Bruok begs to inform the Profession that in the course of the present month he will remove to No. 15, Castlereagh-street.

*Davies Thomas, p. 116, vol. II.

EXTRACTS FROM FOREIGN CURRENT MEDICAL LITERATURE.

By C. A. ALTMANN, F.R.C.S., PORT LINCOLN (S.A.)

A Contribution to the Pathological Anatomy of Influenza (Kuskow. Virchow's Archiv.)—The author, who has had the opportunity of performing 74 post-mortems on cases of influenza, 40 of which were uncomplicated, found the following appearances:—In many instances the striped muscular fibres had undergone changes; the striæ had become indistinct, and albuminoid degeneration was present, this condition being remarkably constant in the heart muscle. In the smaller blood-vessels there was a proliferation of the endothelial cells, most marked in the vessels of the respiratory organs, thrombi being frequently found here. The alterations in the spleen were characteristic, this organ being generally diminished in size, its capsule shrivelled, and the pulp soft and of a dirty greyish-violet colour, dotted with dirty-red looking spots. (*Contrib. f. Inn. Med.*, No. 32, 1895.)

Experimental and Clinical Researches on Influenza: Pathogeny and Treatment. (A. Mossé, *Revue de Méd.*, No. 3, 1895.)—The author tried to ascertain experimentally whether certain agents, and especially quinine, had any prophylactic influence on influenza. In a first set of experiments it was found that rabbits who had been injected under strictly antiseptic precautions with small quantities of blood taken from patients who were suffering from influenza, but who had not yet been subjected to any kind of treatment, succumbed very soon; whilst the symptoms of intoxication were considerably diminished or entirely suppressed in rabbits to whom quinine had been previously administered, either by mouth or intravenously. In the second place it was shown that the introduction of Pfeiffer's influenza bacillus caused severe symptoms of illness, disturbances of sensation and motion, and of the temperature and general condition, terminating fatally in unprotected animals; whereas animals to whom quinine had been previously administered did not manifest any of these toxic symptoms. (See also The Prophylaxis of Influenza. J. G. S. Coghill, *Brit. Med. Journal*, Apr. 6th, 1895, p. 751.)

Intravenous Injection of Perchloride in Pyæmia and Septicæmia. (M. L. Desquin, Ann. et Bull. de la Soc. de Méd. d'Anvers, Feb., 1895).—Encouraged by Kermarck's success in the treatment of his two cases of puerperal septicæmia by intravenous injections of perchloride (see Extr. fr. Curr. For. Med. Literature, *Austr. Med. Gazette*, Dec., 1894, p. 420), the author was induced to try the method in two cases of pyæmia following osteomyelitis, and in two cases of severe puerperal septicæmia. The first case showed no signs of improvement, and terminated fatally; but the remaining three cases recovered, although they were of a very severe nature. The author concludes that "it is the duty of the physician to try intravenous injections of perchloride in any case of septicæmia where he is not successful in obtaining a definite fall of temperature" by other means. (*Contrib. f. Inn. Med.*, Aug. 17, 1895.)

The Treatment of Sycoosis (W. A. Thiele Vratsh, No. 21, 1895).—This writer reports some excellent results obtained in obstinate cases of sycoosis by methodically opening each pustule as it forms, and washing it with a one per cent. solution of perchloride in alcohol. Neither epilation nor shaving are necessary, but the hairs are kept fairly short by scissors. The applications are made at first twice or three times a day, and

later on less frequently, according to the measure of success obtained, but they are only entirely discontinued six (6) weeks after the complete disappearance of all symptoms. At night time the affected parts are dressed with Hebrä's lead ointment, in order to allay the irritation caused by the perchloride.

The Treatment of Hæmorrhoids (Prof. Roux, Therap. Monatshefte, No. 3, 1895).—Prof. Roux speaks highly of this method, which he calls the American. A preliminary purgative is administered to patients subject to habitual constipation. An anæsthetic may or may not be employed. The patient having been placed in the lithotomy position the operator's both thumbs are introduced into the rectum, and the anus is dilated by means of "massage cadencé" until the tip of the thumbs touch the tubera ischii. All the hæmorrhoidal nodules now having become prominent and turgid, each separate nodule is taken between the thumb and index finger (in preference to using forceps), and its base pierced from the anal margin by a Pravaz syringe containing a 50 to 80 per cent. solution of carbolic in glycerine, of which two drops are injected. In a few seconds the nodule begins to swell and becomes of a bluish or darkish-blue colour. The remaining nodules are then taken one by one and treated in a similar manner, each receiving two drops of the solution. The distension of the piles is now so considerable that a spontaneous reduction becomes impossible—a condition which, moreover, is to be desired. At the conclusion an hour-glass-shaped pad of iodoform gauze, dressed with boracic vaseline, is half introduced into the rectum, and retained by a T-bandage. The pain after the operation is trifling, and there is no reaction. The bowels need not be kept confined, and as soon as a desire for passing a motion is felt it is advisable to facilitate matters by the injection of a small quantity of castor oil. On the day after the operation the hæmorrhoidal nodules feel hard, like hazel-nuts, and are scarcely painful to pressure. They gradually disappear. If necessary, patients may be allowed to get up immediately after the operation, but it is preferable to keep them in bed for a day or two. (Der Praktische Arzt, Aug., 1895).

Trional in Surgery. (Dr. V. Schoick, Arzthliche Rundschau, No. 17, 1895.)—Dr. S. speaks highly of the value of trional when given on the night previous to an operation to patients who are sleepless, nervous, and depressed, not so much from pain as from the dread of the impending operation. Such patients, after a suitable dose of trional, awake in the morning refreshed and more hopeful, and are in every respect better subjects for operation than those who have passed the night in a sleepless and depressed state. He found trional much less useful when the sleeplessness was due to prolonged pain. In such cases the addition of a narcotic was required. In suitable cases trional is a certain hypnotic, does not check the secretions, is easily tolerated by the stomach, readily absorbed by the rectum, and does not give rise to any unpleasant secondary effects. (Der Praktische Arzt, July, 1895).

Hydropathic Treatment of Diarrhæa. (Dr. Buxbaum, La Semaine Médicale, October 2nd, 1895.)—Dr. B. recommends, in addition to the usual remedies, the following:—In cases where the trouble has been caused by the ingestion of unsuitable food, and where, consequently, the principal therapeutic indication is to stimulate the peristaltic movements of the intestine, cold sitz-baths (10° to 18° R.) of from one to five minutes' duration give excellent results. On the other

hand, when the diarrhœa is due to exaggerated intestinal peristalsis, warm sitz-baths, of a temperature only a few degrees below that of the body, and of half an hour to an hour's duration, are indicated, with dry, warm compresses to the abdomen in the intervals. Lastly, in catarrhal diarrhœa, the abdomen should be rubbed with a piece of rather rough linen, dipped in cold water, by which means the skin is irritated without causing a chill. This may be followed by cold douches and sitz-baths of from 10° to 40° R. and of from eight to thirty minutes' duration, according to the case.

Formulas for Obstinate Vomiting (Les Nouveaux Remèdes, Sept. 24, 1895):—

I. β . Tinct. Iodi. m xii.
Aq. 150 grammes

To be taken in the intervals between meals, in tablespoonful doses.

II. β . Chloroform 20 grammes
Tinct. Iodi. 2 grammes

Five drops morning and evening in water.

III. β . Cocain Hydroch.... 0.03 centigra.
Antipyrine 1.00 grammes
Aqua 120.00 grammes

A tablespoonful every half-hour.

IV. β . Alcohol Rect. 10 grammes
Menthol 0.05 centigra.
Tinct. Nuc Vom.... 2.0 grammes

10 m in chlorof. water every half-hour.

Port Lincoln, Nov. 8th, 1895.

PROCEEDINGS OF BRANCHES.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

MONTHLY meeting held at the Adelaide Hospital, on 28th November, 1895. Present—The President, Drs. Stewart, A. A. Hamilton, Hayward, Evans, London, J. A. G. Hamilton, Giles, A. E. Wigg, Robertson, Poulton, Sweetapple, Fischer, Symons, Teichmann, Way, Hone, Cudmore, Singleton, Watson, Archer, Marten, Russell, and hon. sec. (Dr. Swift).

The PRESIDENT (Dr. T. K. Hamilton) exhibited:—

1. A case of *Xerostomia*, or *Dry Mouth*, and read the following notes:—

CASE OF XEROSTOMIA.

BY T. K. HAMILTON, M.D., F.R.C.S.I., Hon.
PHYSICIAN TO THE THROAT DEPARTMENT,
ADELAIDE HOSPITAL.

L.B., aged 46, a native of Germany. The only thing to be noticed in her family history is that her mother died of rheumatic gout, and one of her brothers is rheumatic. She seems to have enjoyed uniformly good health up to March of this year, when she began to suffer from a sensation of dryness of the nose, throat, and mouth. This symptom has remained, and become more marked ever since.

She came under my observation on June 3rd, and her condition then was as follows:—

A strong-looking woman, accustomed to the manual labour of a farmer's wife. She has passed the menopause between two and three years without any of the throat neuroses, often connected with this period, having shown themselves. The mucous membranes of the whole tract from the nose down to the trachea is more or less dry; the tongue seems to be most affected; it is red, hyperæsthetic, rather glazed, and the fungiform papillæ are prominent, as if there were a desquamation of the epithelium on their surface. The salivary glands do not respond to either mechanical, chemical, or mental, and only slightly to electrical, stimulation. A constant current of 20-25 milliamperes and a fairly strong secondary faradic current applied to the dorsum cause some saliva to flow, apparently from the submaxillary gland, but the effect does not last long. She feels as if she must keep something in her mouth to suck, so as to be able to use the tongue at all for speaking. Beads of limpid fluid, like mucin, are seen standing out on the otherwise dry surface of the hard palate. Steno's duct is probably open on both sides—certainly on the right. The nose presents the condition of a dry non-atrophic rhinitis. In the naso-pharynx is found some enlargement of the pharyngeal tonsil, with synœchiæ on both sides, and the surface is covered with a thick coating of viscid mucus. The posterior wall of the pharynx is somewhat anæsthetic; the tonsils are degenerated, and cheesy accumulations found in some of the crypts, the removal of which with the curette did not seem to excite any reflex flow of saliva, as it usually does. There is some lymphoid enlargement in the post-lingual region. The whole buccal cavity, hard and soft palate, and lips, share in the dryness. In the larynx there is a condition resembling the "dry laryngitis" described by Moure and Hunter Mackenzie; the arytenoids and ventricular bands are somewhat thickened; the cords dull and glazed, but their movements are normal; there is dryness also of the trachea. Both the sense of taste and smell are defective. These were acute before the dryness came on. Mastication is difficult, so that she cannot get dry food of any kind down; salt or acids irritate the tongue so much she cannot take them. She is constipated; there is slight conjunctival catarrh; she says her eyes feel dry, and that she cannot read with comfort; accommodation is normal; the patellar reflexes are normal. There is no swelling of the parotids, and at first there was no tenderness; now pressure causes pain over each gland. She has

frequent desire to urinate; the urine is normal, sp. gr. 1015; no sugar or albumen; she has some pain and swelling and stiffness of the small joints, and more recently of the larger ones, too. These pains commenced in the metatarsophalangeal joints first, and they are always worse at night.

Her general health is not now so good as when I first saw her, as her appetite has failed. No treatment seems to have had any effect so far. She has had Pilocarpine hypodermically, and has taken gr. $\frac{1}{30}$ thrice daily, as recommended by Blackman*; also Iodide of Potassium and Salicylate of Soda, without any benefit, and the constant current and faradic have been applied locally.

Thus far only between twenty and thirty cases of the affection have been reported. The name Xerostomia was applied to it by one of the early writers, as it was then supposed that the dryness of the mouth was the only symptom. It is now generally believed that the condition is due to some change in the central nervous system. How far the rheumatic gout history and tendency of this patient comes in as a cause is difficult at present to determine. Dr. Beverley Robinson has found the two conditions associated in one of his cases. There is very very little reference to the disease in any of the text books. Dr. Chappell has recently brought the subject before the New York Academy of Medicine in an interesting paper in which he summarises all the available information on the subject up to date.†

2. A case of *Lymphangitis of the Tongue*

3. A case of *Empyema of the Antrum*, of three years' standing, which presents some points of special interest. Spicer's operation was performed three weeks ago. The interior of the antrum was found to be bilocular, a vertical septum dividing it into two completely separate cavities. The outer one, twice the size of the inner, contained pus and a large mass of what, on microscopic examination, proved to be inflammatory thickening of the mucous membrane. The pus was imprisoned in this cavity, as the septum shut it off from the nasal outlet, and being pent up, softening and distension of the anterior wall had already gone on to a very considerable extent.

4. A case of *Carcinoma of the Antrum*. The enlargement of the cheek commenced three months ago, and on examination an elastic swelling was found springing from the lower and outer part of the orbit continuous with a more firm distension of the canine fossa. On performing Spicer's operation, the anterior wall was found quite soft, the cavity of the antrum full of soft granulation-like tissue, but no pus, and an opening about 1 x 50 c.m. was discovered through the roof into the orbit. A puncture through an apparent cyst wall in this opening allowed of the evacuation of a quantity of fluid. Dr. Teichmann has kindly made a microscopic examination of the specimen, and reports as follows:—"The anterior wall is composed of soft tissue $\frac{1}{16}$ in. in thickness, entirely destitute of any bone. This

*Brit. Med. Journal, June, 1890.

†Journal of Laryngology, Vol. ix., page 705.

presents the appearances of a glandular carcinoma. Some masses of epithelial cells show a tendency to mucoid degeneration in their centre, and in some this has advanced to such a degree as to produce a cavity."

The trans-illumination test came in as a valuable aid to diagnosis in both these cases, especially as in both there was an absence of the usual discharge from the nostril.

Dr. LENDON showed a child, one year of age, upon whom he had recently operated for microcephalus. The fontanelles were said to have been closed at birth; there was an extreme degree of microphthalmos, but no sign of idiocy, as in the case reported previously. (*vide p. 330.*)

Dr. SWIFT, a boy from whose thigh he had removed a large encephaloid sarcoma.

Dr. POULTON, a woman upon whom he had operated for appendicitis.

The pathological specimens were numerous and most interesting.

Dr. LENDON showed:—(1) A tubercular testis. (2) A uterus of normal size, to the cervix of which a myoma weighing 4 lbs. was attached. When the patient, who was 86 years of age, came under observation first, the tumour was full just within the vulva, and was sloughing. In less than a week it had projected considerably, but under ether the hand inserted into the vagina failed to reach its extremity, or to detect any portion of the cervix. The projecting sloughing portion was removed, but the patient succumbed to pulmonary embolism (?) the next day. The tumour was the size of a small vegetable marrow.

The minutes of last meeting were read and confirmed.

Dr. GILES read his paper on "Appendicitis."

Dr. POULTON followed with notes of some cases.

NOTES ON APPENDICITIS.

By W. ANSTREY GILES, M.B. AND C.M. EDIN.,
LECTURER ON CLINICAL SURGERY IN THE
UNIVERSITY OF ADELAIDE, SURGEON TO
THE ADELAIDE HOSPITAL.

IN response to a request for a contribution on the subject of "Appendicitis" for this evening's meeting, I have looked up the notes of two cases operated upon by me in the Adelaide Hospital, and propose to deal briefly with them. They illustrate two different types of the disease—the one associated with a most acute inflammatory condition, causing sloughing of a portion of the process and pus formation; the other less acute, uncomplicated by the pressure of pus, and frequently recurring. My experience in dealing surgically with appendicitis is limited, as in only these two instances have I found it necessary to operate, but many cases have come under my observation which yielded readily to simple remedies, and others, more severe, though admitted to my wards for operation, have recovered perfectly without surgical interference.

Professor White, of Philadelphia, states that about 80 per cent. of patients suffering in this manner recover without the surgeon's aid. Of the remaining 20 per cent. at least one half can be saved by operation during the condition of localised abscess, which would form probably in that proportion of cases. Of the remaining ten, in which no protective adhesions would form, a certain indeterminate proportion would recover after operation done before septic peritonitis and intestinal paresis had occurred. This would leave a death-rate of, say, from 5 to 8 per cent.

The question of when we should operate is still debatable, and has led to a variety of strongly expressed opinions by many experienced surgeons, and one section of the American school maintains that in every case of appendicitis the process should be removed.

With regard to recurrent cases, Dr. Dennis, surgeon to the Bellevue Hospital, New York, believes that it is not wise to operate during the interval, as the patient may never again be endangered by the disease, but if surgical interference is decided upon the second or third day of the attack should be chosen. On the other hand, Mr. Fredk. Treves states emphatically, and I certainly adopt his view, that the less interference the better in such cases during the inflammatory stage, while removal of the appendix undertaken during quiescence has yielded brilliant results in his practice, as he has operated on a large number of individuals at this period without having a single death to record.

CASE No. 1.—I am indebted to Dr Way for this patient.

A. R., *æt.* 19; domestic servant; was admitted into the Adelaide Hospital on 25th June, 1895, complaining of severe abdominal pain of about 36 hours' duration. The pain commenced suddenly soon after a meal, first of all attacking the upper part of the abdomen and travelling downwards. It was of a stabbing character, and previous to admission was not more intense on one side than on the other. Not until the day after admission did she complain of the pain being chiefly in the right iliac region, or some sixty hours after the onset of the attack. It remained constantly present in this situation, and of a very intense description. She vomited frequently on the night of the onset, and next day, when this symptom passed off. The abdomen has been very much disturbed and tender to touch since the commencement of her illness. She has felt no inclination to take nourishment, has not been thirsty, has been very feverish, but had no shivers. The bowels were opened by enemata. She experienced pain with

micturition, but could void urine spontaneously up to the time of admission, since when it has had to be drawn off.

Previous History.—About twelve months ago she had a somewhat similar attack of pain in the right side, but not so severe as on this occasion. She was laid up for a few days, but speedily recovered completely. This is the only other painful abdominal seizure she can recollect. About six months ago she suffered from a leucorrhœal discharge, and has had a feeling of discomfort accompanied by a dragging sensation in the right side, after taking exercise, ever since.

On admission.—"A well-nourished girl lying on her back, with knees drawn up, cheeks flushed, and suffering severe pain. Temperature, 101.8°; pulse 110, soft and regular; respiration 24 per minute, easy and regular; no cough; tongue moist, and coated with a thick yellowish fur; heart and lungs normal."

Abdomen.—"Full, distended, and especially prominent below the umbilicus. The prominence is symmetrical. There is intense tenderness all over, but particularly in the right iliac region, where there is marked rigidity and resistance. There is no definite tumour. The percussion note is impaired over the lower and outer part of this resistance, but tympanitic elsewhere. There is no evidence of fluid in the abdomen."

On the 30th June the patient was examined under chloroform, when the general resistance of the abdominal muscles disappeared, except in the right iliac region, where a distinct lump was felt, about the size of two fingers, in the situation of the appendix, and running downwards in its direction. P.V.—The uterus was retroverted, and the lump made out on abdominal palpation; could just be reached by the finger in the vagina, but not accurately defined.

On the 2nd July ether was administered, and a longitudinal incision was made in the right iliac region about three inches in length, and over the site of the appendix. As soon as I opened the peritoneum a mass of hardened and inflamed omentum presented, which formed the inner wall of an abscess cavity about the size of a large duck's-egg. The outer wall was formed by the iliacus muscle. In spite of every care while making my examination of the part, the posterior wall, which was very thin and friable, gave way, and a quantity of very offensive dark-coloured pus, with a feculent odour, escaped. This was swabbed away as thoroughly as possible, and every effort was made, by carefully arranging the gauze mops, to save the general peritoneal cavity from infection. I then searched

for the appendix, which I found intimately attached to the inferior surface of the omental mass already alluded to, and with a perforation at its apex. When I had separated all adhesions and ligatured the mesentery, I removed the appendix by the method recommended by Tréves. I then ligatured and removed the inflamed and indurated portion of the great omentum which had formed the inner wall of the abscess cavity, because it had been bathed in pus, and was also considerably contused through the removal of the appendix so firmly adherent to it. I scraped any lymph and septic debris away from the surface which had been in contact with the purulent collection. Mopped the cavity thoroughly dry, and completed the operation. I did not make any attempt to wash out the abdominal cavity. The patient rallied fairly well from the operation, but her condition was never satisfactory, and she complained of great pain. The abdomen became greatly distended, and her state was so critical that on the second day I reopened the wound, and washed out the peritoneal cavity, evacuating a large quantity of thin, offensive pus. No improvement followed, and on the third day she died of acute peritonitis. Autopsy 18 hours after death.

"Recent general acute peritonitis; most intense in the right iliac region and pelvis, where there was a quantity of lymph and dirty fluid pus. The great omentum was plastered on to the intestines and inflamed, and the intestines everywhere were glued to one another by lymph. There was no perforation of the colon. The stump of the appendix was found turned into the cæcum, and beneath the peritoneum as at the operation. There was no leakage."

Dr. Hayward kindly placed this patient under my care:—

CASE II.—F. W., æt. 20, stableman; admitted into the Adelaide Hospital on the 22nd June, 1894, complaining of pain in the right side of the abdomen and severe headache. The pain in the abdomen commenced in the morning of the day of admission, in the right iliac fossa, and extended over to the left side, accompanied by vomiting and headache. The attack came on quite suddenly.

History.—He has had six similar seizures at intervals of about a month, all of which lasted about a week. The patient felt quite well during the intervals, and was able to follow his usual employment without discomfort. With every attack he had fever, shivering and sweating, and they came on without warning. With the fifth attack he had diarrhoea, slight melæna, but not tenesmus. With all the others constipation.

Had never been jaundiced; never any trouble with micturition at any time; no other illness.

On Admission.—"A well-nourished man; face flushed; pulse 102 per minute, regular, strong; temperature, 101°6'; tongue covered with a white fur; heart and lungs normal."

Abdomen.—"No distension, no undue prominence, recti muscles '*en garde*'; marked tenderness in both iliac fossæ, but most distinct at McBurney's point on the right side. There is no tumour and no dulness."

Urine.—"Sp. gr. 1035, acid; no albumen; no sugar."

Three days after admission the temperature was normal. Six days later all abdominal tenderness had completely disappeared.

On the 11th July the patient was anesthetized with ether, and I made an incision from 3 to 4 inches long over the site of the cæcum. Immediately after opening the peritoneum I encountered difficulties on account of the numerous adhesions present, which were dense and organised. The intestines were adherent to the anterior abdominal wall, and to one another, and a large number of bands had to be divided and ligatured before the cæcum could be recognised. The appendix was eventually discovered embedded in a mass of adhesions, and firmly glued to the posterior surface of the cæcum. It was by no means an easy task to separate and remove it under such circumstances, but finally it was isolated and cut off, and the stump was treated in the same manner as in the preceding case.

The appendix removed was about 1½ inches in length; its walls were greatly thickened, and it contained three enteroliths, each about the size of a swan-shot.

15th July.—Patient quite comfortable; no pain; temperature normal; tongue clean and moist.

On the 14th August the patient was discharged perfectly well, having made an uninterrupted recovery.

He reported himself at the Hospital a fortnight back, looking strong and well, and stated that he had enjoyed excellent health since under treatment 15 months ago.

Remarks.—In both cases I treated the stump of the appendix according to these instructions:—"The appendix should be lightly clamped close to the cæcum, and should be divided about half-an-inch from that intestine; it should not be secured by a simple ligature. The mucous membrane should be united by many fine sutures, or by a continuous suture; then the divided outer-wall of the process should be brought together by a second row of sutures."

In addition to these two rows of sutures, I pushed the stump back into the lumen of the cæcum, and by means of half-a-dozen Gussenbauer's sutures I drew the peritoneum lining that intestine over the attachment of the appendix, thereby leaving exposed a single row of sutures instead of a projecting stump, the termination of which is liable to become adherent to surrounding tissues, and may consequently give rise to future inconvenience. I look upon this simple manœuvre as distinctly advantageous, for, in addition to the impossibility of the base of the appendix forming adhesions to surrounding parts, it acts as an extra safeguard by closing with greater security its lumen. In case I. we were in a position to demonstrate the success of this method four days after operation, when the peritoneal surfaces were found adherent over the base of the appendix, and its place taken by a row of sutures in the wall of the cæcum.

This case undoubtedly demanded operative interference, as the patient was daily getting worse, in spite of rest and every care. It was a most unsuitable case for removal of the appendix, on account of the acute inflammatory state present, and the purulent collection. Had the walls of the abscess cavity held together I should certainly have contented myself by simply evacuating the pus and draining, but, under the circumstances, I believe I gave the patient her only chance by performing the operation I have described.

I did not make any attempt at the first operation to wash out the general peritoneal cavity, because by doing so I should have transferred septic material from the right iliac fossa to other parts of the abdomen, and I could not have hoped for any compensating advantage from irrigation. Subsequently, when there was no doubt whatever about the general peritoneal cavity being infected, I used the douche very freely after reopening the wound.

I look upon Case II. as a typical one for the operation. Here we had a man who had suffered from repeated attacks, with intervals of quiescence lasting about a month. We waited until all inflammatory evidences had completely disappeared, and then removed the appendix, with the admirable result recorded. Certainly, no one could absolutely state that he would have another attack, but I maintain that the risk he was submitted to from the operation was not so great as the risk he ran from dangers attendant upon the fresh seizure which sooner or later might be expected.

There can be little doubt that if the operation has been decided upon it should be done during the period of quiescence, as the difficulties are

then usually much less, and there is a diminished risk of general infection. The following rules have been laid down by Treves as a guide in chronic relapsing cases:—

Operation is indicated when—

1. The attacks have been very numerous.
2. The attacks are increasing in frequency and severity.
3. The last attack has been so severe as to place the patient's life in considerable danger.
4. The constant relapses have reduced the patient to the condition of a chronic invalid, and have rendered him unfit to follow any occupation.
5. Owing to the persistence of certain local symptoms during the quiescent period, there is a probability that a collection of pus exists in or about the appendix.

CASES OF APPENDICITIS.

By B. POULTON, M.D., ADELAIDE.

1. JAMES C., *æt.* 41, farm labourer; admitted into medical ward under the care of Dr. A. A. Hamilton, on August 13th, 1895, complaining of pains in abdomen of five or six weeks' duration. Had had "inflammation of bowels" six months previous to admission, and persistent abdominal tenderness since then. About five or six weeks before admission had a severe attack of abdominal pain, which doubled him up and made him vomit. Pain began left side, and radiated round abdomen. Had three severe attacks like this, and during the intervals had persistent tenderness of the abdomen, but no spontaneous pain. Never any jaundice or hæmaturia. Bowels constipated during attacks, regular at other times. Some fulness after meals generally, and slight dyspeptic symptoms.

P.H.—Inflammation of lungs twelve years ago.

F.H.—Good.

On admission.—Well nourished, and in no pain or distress. Temperature normal.

Tongue clean, moist; bowels open.

Heart and lungs normal. Abdominal tenderness in upper part; none in R. iliac fossa; no tumour, but general muscular resistance. Note tympanitic.

Urine acid; no albumen.

Remained in medical wards for a month, with complete rest in bed and careful dieting. During this time had persistent feeling of soreness in R. iliac fossa and tenderness on pressure here. Distinct resistance made out in this region per rectum.

On September 14th was transferred to surgical ward, under Dr. Poulton, and etherized. Per

rectum there was a feeling of something abnormal in R. iliac fossa, suggestive of some inflammatory exudation. Great tenderness in R. iliac region, most pronounced at McBurney's point; no definite tumour palpable externally.

On September 18th was again etherized, and appendicectomy performed. Oblique incision made, as usual; peritoneum opened; appendix found without difficulty; no adhesions to surrounding parts, and was brought up easily to surface. Extremity was very oedematous; sleeve of peritoneum was dissected up, appendix removed, and stump covered with peritoneum; external incision then sewn up, and sealed with Whitehead's paint.

Removed appendix was 2½ in. long; contained about 30 minims of dirty-greyish coloured fluid, not purulent; no foreign body detected; lumen somewhat constricted near base.

Had a good deal of pain after operation, and retention of urine for first day. Temperature constant at 100°; wound dressed on third day on account of temperature and persistent tenderness; extra-peritoneal abscess found extending 2 in. to 3 in. up in muscular walls; about 3ii. pus let out, and small drainage-tube put in. This gradually closed up, and wound was quite healed a month after operation. Bowels quiet for five days, and then kept regularly open. Had a good deal of abdominal pain at nights, generally on L. side; never any distension; due to flatulence, and relieved by Aq. Ment. Pep. Other symptoms of dyspepsia relieved by Liq. Peptici. Was allowed up a month after operation, and ten days later was sent to Convalescent Home. Train journey brought on retching, though no actual vomiting; had persistent pain in L. side of abdomen for a week after. Reported a month later complaining of swelling about wound. Scar perfectly firm; no tendency to hernia; swelling due to flatulent distension of cæcum and ascending colon; bowels constipated. Sent home with pepsin, and instructions to keep bowels regular.

II. Mrs. M. G., *æt.* 38; admitted October 25th, 1895, under the care of Dr. A. A. Hamilton.

History.—First attack two years and five months previously, six weeks after confinement, and apparently unconnected with it. Onset sudden, with general abdominal pain, lasting three or four days. No localised pain, vomiting or distension.

Then perfectly well for five months, when had second attack of exactly same character and duration.

Third attack ten months later. Fourth attack nine months later, and about five months

before admission. In all these the pain was general, never localised; abdomen not swollen; had some vomiting at onset, and frequency of micturition. No lump palpable in first attack, but in all subsequent ones; none lasted more than three or four days. Was perfectly well in intervals; no dragging pain in side, or on straining or exertion; no irregularity of bowels; no persistent tenderness or lump in R. side; no dysmenorrhœa; no affection of general health; very slight dyspepsia at times.

Five weeks before admission had an attack of diarrhœa, followed by another attack of abdominal pain, which settled down in R. side, and lump could be felt here. Got up after three or four days, but from this time had a constant soreness in R. iliac region. Had two more acute attacks during the next fortnight, and another one about a fortnight ago. The last is the worst she has yet had; lump in R. iliac region was very plain. Was brought into hospital four days after its onset in a good deal of pain, which soon disappeared, and she has gradually coalesced. Was transferred to surgical ward about ten days after admission, in no pain, with normal temperature; bowels open regularly; good appetite; clean tongue, but a narrow sausage-shaped lump palpable, lying obliquely in R. iliac fossa; well defined; not tender; no muscular resistance over it; seemed somewhat fixed; no dulness. No lump palpable elsewhere; walls of abdomen relaxed; no tenderness in lumbar region.

P.V.—Pelvic organs perfectly normal in position and size; mass in iliac fossa quite unconnected with any of them; did not reach into pelvis.

Urine acid; contained no albumen or sugar. Had had no previous illness except these attacks, and typhoid fever fourteen years before. Married nineteen years; four children, and one mishap; youngest child two years and five months old. Menstruation irregular and scanty since; no dysmenorrhœa. Transferred to the surgical wards, under Dr. Poulton. Operation was decided on; patient was etherized on November 6th; nothing fresh made out on examination under ether; usual oblique incision for appendicectomy made; muscles cut through, and peritoneum exposed and opened. Cæcum found without much difficulty, but a good deal of trouble in making out appendix exactly and its relations, owing to its firm adhesions to omentum, which partly covered it. These were stripped off from it and neighbouring bowel with difficulty, and other adhesions of bowel and mesentery broken down. Appendix then found to be curved on itself, and adherent in this way;

straightened out. There was a good deal of hæmorrhage while separating adhesions, and on one occasion a little glairy mucus escaped, as though from appendix by rupture of adhesions covering some ulcer. A sleeve of peritoneum was dissected off appendix, ligature applied as far up as possible, and distal portion removed, without a probe being passed. Examination of part removed showed a patent canal, except at one point near ligature, where was very constricted; little collection of mucus, no pus; muscular wall very greatly hypertrophied, nearly half-an-inch thick. Stump of appendix left rather larger than had been meant; was covered with peritoneum, which was sewn over it. Large piece of omentum, that had been most closely adherent and was partially strangulated, was ligatured and removed; remainder left, after bleeding vessels were secured; surrounding tissues, with pelvic cavity, sponged dry; not much escape of blood here, and some found gravitating into R. lumbar region; glass drainage tube put in here, and rest of wound sewn up with catgut.

Recovery after operation was uninterrupted. No bad symptoms; temperature never above 100°; normal after fifth day; tube taken out on third day; wound healed by first intention, except where tube was; all quite healed by three weeks, and patient allowed up; no return of pain while in bed; gained strength and weight.

Dr. Hone, my house surgeon, has been kind enough to prepare the notes of the hospital cases.

III. J. B., telegraph operator, aged about 35 years, seen in consultation with Dr. A. E. Wigg, gives the following history of his illness:—On the 12th of January of this year ('95) he was troubled very much with difficulty in defæcation, and after much straining was unable to obtain an evacuation of the bowels until after taking half-an-ounce of castor oil. He felt queer for the rest of the day, and awoke next morning with persistent dull aching pain in the abdomen, which continued all day. On the 15th the pain became very acute in the right side of the belly, and was relieved by a hypodermic injection of morphia (Dr. Singleton). The pain, although relieved by morphia, did not entirely disappear, and vomiting was almost incessant for three days, and then gradually became less frequent. He was confined to bed for ten days, and returned to work.

On April 17th he woke at three in the morning, with dull pain in the abdomen, especially fixed in the right side. Vomiting set in, and persisted for three or four days, and then

gradually ceased. The pain during this second attack was never acute, except on attempts to lie on the right side. The period of confinement to bed was fourteen days.

He was again able to go on duty until June 16th, when he woke at midnight, shivering, but not cold. Vomiting set in, and persisted for eighteen hours. Pain during this attack was less severe than in previous ones; began, as in them, in the umbilical region, and then attacked the right iliac region. After the first and second attacks his health gradually improved, but he was troubled a great deal with flatulence. On the day preceding the last attack he felt capitally well.

Dr. A. E. Wigg was kind enough to call me in consultation on June 18th, the third day of the final illness, with a view to removing the appendix.

The symptoms were then subsiding, but he was weak, confined to bed, and had some pain in the iliac fossa, increased by gentle palpation pressure over McBurney's point excited pain. He was transferred to a private hospital, and on the following day had a temperature of 99.98°. With the assistance of Dr. H. H. Wigg (Dr. A. E. Wigg giving ether), appendicitis was performed.

The appendix was bound down by firm adhesions, which were separated slowly and carefully with the finger-nail, and the appendix was not liberated until a small localized abscess had been ruptured. Appendix removed, stump ligatured; sleeve-like covering of peritoneum sutured over; pus mopped out carefully with iodoform gauze; rubber tube kept in for ten days, then removed. Three weeks after the temperature rose to 101°; the sinus, which had remained since the removal of the tube, was dilated, and a small quantity of pus evacuated. The temperature fell to normal at once, but the sinus persisted for quite two months. Two weeks after the reinsertion of the drain-tube small fragments of necrosed tissue were washed out through the tube. He returned to his duties, and has had no further trouble connected with his abdomen.

An interesting discussion ensued, in which Drs. Hayward, Wigg, Stewart, J. A. G. Hamilton and A. A. Hamilton took part.

Drs. GILES and POULTON replied.

Dr. HAYWARD was pleased that Dr. Giles had given the figures he had at the commencement of his paper, also, that he had been able to relate two such distinctive cases—the one emphasising the dangers of the operation for removal of the appendix; the other, a typical example of the benefits to be expected in carefully-selected cases. Till quite recently the appendix had been looked upon not only as a useless appendage

to the cæcum, but as a dangerously-useless one, a trap for the collection of stray cherry-stones, pins, and other foreign bodies. Modern pathologists were inclined to give it a higher status, and, owing to the presence of a large quantity of lymphoid tissue, it was placed on a level with the tonsils. Moreover, it had been shown that it was next to impossible for foreign bodies to pass from the cæcum and lodge in the appendix, the so-called ones being usually formed from its retained secretion. Clinical observers had noticed that, as in the case of tonsillitis, so in appendicitis, there was an apparent connection with the rheumatic, or, more probably, the uric acid diathesis. He (Dr. Hayward) had for the past few years noted the action of salicylate of sodium in cutting short many cases of this disease. While insisting that the vast majority of cases only required medical treatment, he cordially agreed with Drs. Giles and Poulton that a certain number should be treated surgically; indeed, Dr. Giles' successful case had been sent from his medical ward for operation. He considered it quite open to question whether, in cases similar to Dr. Giles' first case, it would not be wiser to delay operating as long as possible. Certainly there would be the risk of the pus breaking into the peritoneal cavity. On the other hand, there would be the probability of adhesions forming and the walls of the abscess cavity becoming thicker, and so lessening the chance of the accident alluded to by Dr. Giles. Each case, however, would have to be treated on its merits.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE general meeting of the Branch was held on Friday evening, 29th November, 1895. Present—Dr. E. J. Jenkins (President), Drs. Carvoso, Fiaschi, Angel Money, Knaggs, Wilkinson, Evans, Pope, Hughes, Thring, Litchfield, Crago, Colpe, M'Donald Gill, Sinclair, Manning, Paton, Scot Skirving, Worrall, Fairfax Ross, Lennhoff, Clubbe, Jas. MacLeod, Hankins, Pockley, Murray Will, Gordon MacLeod, McKay, Spencer, MacSwinney, O'Hara, Brady, Morgan Martin, Clay. Visitor: Dr. Millard.

The minutes of the previous meeting were read and confirmed.

The PRESIDENT informed the members that Dr. Knaggs (Editor of *The Australasian Medical Gazette*) had dedicated the use of his library, situated at 121 Bathurst-street, to the use of the profession, and that the library would be available from 2 to 5 o'clock every afternoon.

Dr. THRING proposed "That a vote of thanks be accorded to Dr. Knaggs for his kindness in dedicating the use of his library for the use of the profession."

Seconded by Dr. FIASCHI, and carried.

Dr. FIASCHI read some notes on a case, "Trephining for Cerebellar Tumour," and exhibited the patient, who was examined by the members.

Dr. EVANS said that, unless the patient exhibited by Dr. Fiaschi had been seen before the operation, it was hardly possible to realise the improvement in the lad since the operation. Before the operation the patient was, amongst other things, suffering from optic neuritis, but had unfortunately developed an atrophy, which of course could not be cured. He (Dr. Evans) had not had an opportunity of taking the patient's field since the operation, but hoped to do so before he left the hospital. There could be no doubt the paralysis had been caused by pressure, and that the marked improvement in the patient generally had been brought about by the removal of the pressure. The successful

results of this operation certainly opened up a new field in intra-cranial surgery.

Dr. ANGEL MONEY said that he had seen trephining done seven or eight times for cerebellar tumour; in every case there was relief to the headache and vomiting. He had very little doubt that Dr. Fiaschi's case was one of tubercular tumour in the cerebellar region. It did not appear to be sufficiently recognised that "crude" tubercle underwent retrogression, notwithstanding that many cases of the kind had been recorded. There should be no hesitation in trephining cases similar to the one shown by Dr. Fiaschi.

Dr. FAIRFAX ROSS said it was quite possible that this lad suffered tubercular tumour on the brain, and that the opening may have relieved the pressure, and so brought about the improvement in the patient. He remembered a case where a woman had no symptoms of tubercular abscess; but at the *post-mortem* it was found that she had been suffering from this disease.

Dr. FIASCHI said he was anxious to exhibit the patient to show the great relief to be obtained by the removal of the intra-cranial pressure in cases of this character.

Dr. WILKINSON read notes on four cases of empyema of the frontal sinus, which will be published in next issue.

The PRESIDENT said he would like to hear any remarks upon Dr. Wilkinson's paper. He (Dr. Jenkins) remembered a case of a man who had been operated upon by Dr. Brady, who afterwards went to England for further treatment, but was told that nothing further could be done.

Dr. SCOT SKIRVING said that he agreed with Dr. Wilkinson that suppuration of the frontal sinus was more common than is usually believed. With better methods of diagnosis this would be proved. He rose chiefly to endorse Dr. Wilkinson's commendation of the value of trans-illumination as a means of diagnosis. To those who had not special skill, and special opportunities, the diagnosis of pus in the antrum was often missed altogether, or, at best, a matter of incertitude. By means of trans-illumination even those not specially skilled in nasal and throat surgery could be pretty sure of their ground. Dr. Scot Skirving also described a simple addition to an ordinary electric light, whereby, at small cost, trans-illumination could be applied to the diagnosis of trouble in the frontal sinus.

Dr. ANGEL MONEY said he had seen the case mentioned by Dr. Jenkins. The patient fancied he was suffering from leprosy. He had a burning sensation all over the body, and it did not appear to have struck any one to have thought of any trouble arising from the frontal sinus.

Dr. BRADY exhibited a lamp used for trans-illumination in the cases of examination of the frontal sinus. Also, a skull showing where he made the opening in operating on the frontal sinus.

Dr. CLUBBE read a short account of the first 100 cases of diphtheria treated at the diphtheria branch of the Children's Hospital with anti-toxin, and a comparison with the preceding 100 cases treated without.

Dr. JENKINS said he had to thank Drs. Clubbe and Litchfield for the instructive and valuable paper on the use of anti-toxin. No institution had had better results in the treatment of diphtheria than the Children's Hospital, and there could be no doubt that the good results obtained were largely due to the care bestowed upon the cases by Dr. Clubbe, who visited the Hospital daily, and frequently several times in the day when necessary.

Dr. MACSWINNEY would like to ask Dr. Clubbe how much anti-toxin could be used. He knew of a case where there had been five separate injections of anti-toxin, and although the child died there was a distinct improvement in the breathing after each injection of anti-toxin.

Dr. THRING said he would like to congratulate Dr. Clubbe upon his carefully-prepared paper, which would be read with interest by many who had not heard it. Although now he (Dr. Thring) saw little or nothing of tracheotomy, at one time he had done a good many operations. There could be no question that anti-toxin was frequently blamed for the neglect of the practitioner, who simply injected anti-toxin, and thought that the case would get well of itself. Not so with Dr. Clubbe, who gave such personal care and attention to the after-treatment of his cases, and thereby obtained such exceedingly good results.

Dr. LENNHOFF said he would like to know whether anti-toxin should be given in cases of sore throat. He had tried anti-toxin in his private practice, but could not venture to draw conclusions as to its benefits from his own experience and observation.

Dr. POCKLEY said he would like to know from Dr. Clubbe whether the post-diphtheritic paralysis symptoms were more frequent since the introduction of anti-toxin. It had been stated they were, but the reason given was that there were more recoveries under the anti-toxin treatment.

Dr. CLUBBE, in reply, said that it was difficult to answer Dr. MacSwinney's question. It was not known yet how much anti-toxin could be given with impunity. The largest amount given to one case at Diphtheria Ward was 60c.c. of Ruffer's. He would advise Dr. Lennhoff not to give anti-toxin in mild cases of sore throat until it was proved that the case was one of diphtheria. Dr. Pockley has practically answered his own question. The reason that more cases of post-diphtheritic paralysis come under notice now was that formerly cases that would have developed this symptom, had they lived, died poisoned early on in the disease.

THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PRESENT—Dr. Snowball (President), Drs. Kent Hughes, A. L. Kenny, A. J. Wood, Noyes, C. Godfrey, H. Godfrey, Henry, Stawell, Cuscaden, Hamilton, Stanley Read, Nihill, R. H. Morrison, Officer and Mullen.

The minutes of the previous meeting were read and confirmed.

Dr. HENRY, by permission of the President, said he desired to bring under the notice of the meeting certain hardships under which he, in common with many other medical men, was suffering from in connection with the assessment of the Income Tax. He had in his schedule deducted certain expenses incurred in carrying on his profession—*e.g.*, the cost of an accountant and a collector. These had been disallowed by the authorities, who stated that, though such deductions would be allowed to a business man, they could not be allowed to a medical man. He (Dr. Henry) thought them to be necessary expenses, and although he had paid the extra assessment he thought the matter of sufficient importance to bring before the meeting. Such items, small as they might be in individual cases, yet, when continued over a number of years, and levied on all medical men, constituted a considerable amount in the aggregate.

Dr. HAMILTON stated that in his case the authorities

had actually disallowed the cost of his groom, and had arbitrarily fixed the cost of keeping two horses at \$36 a year; their keep cost much more. He, too, had received an extra assessment, but intended to pay rather than go to the trouble of objecting.

Dr. CUSCADEN also thought with Dr. Henry that something should be done. Certain expenses which he had to incur in his profession were disallowed; he would pay the amount, as he could not waste a day or more in the process of objection.

Dr. MULLEN said that the matter was one for the Medical Defence Association, but pointed out that in this instance nothing could be done. The gentlemen assessed, wrongly as he thought, had either paid or desired to pay the extra assessment, and unless some one definitely objected when he made the extra payment there was no material on which the Defence Association could act. This matter was just another instance of those cases in which the profession suffered enormous loss in the aggregate, because no single person would make a stand on the matter. If any member of the Defence Association entered formal objection to his assessment, and asked that Association to take it up on principle, no doubt the matter would be definitely settled, but until some one did so members individually must sustain the burden.

The matter was then referred to the Medical Defence Association.

The HON. SEC. then brought before the meeting a letter and other correspondence from the Queensland Branch on the question of the bacteriological examination of suspected lepers by laymen. He briefly placed the facts (as set out at length in the last number of the *Australasian Medical Gazette*, pp. 403-5) before the meeting.

Dr. NOYES said he thought it so obviously necessary in cases of suspected leprosy that bacteriological examinations by laymen should be controlled by qualified medical men that any lengthy discussion of the matter would be superfluous. Bacilli are not present in all the skin lesions of leprosy, and it is therefore most important that material for bacteriological examination should be selected with the greatest care by a qualified medical man. Bacilli are notably absent in the ulcerating trophic affections of the skin due to the destruction of nerve trunks. How are these lesions to be distinguished by a layman from ulcerating lepromas? I have, therefore, much pleasure in moving,—"That this Branch of the British Medical Association concurs wholly in the resolution proposed by Dr. Taylor in the discussion on the case of the suspected leper Molloy, to the following effect:—"That, whereas a bacteriological examination forms an important part of the medical examination of a suspected leper, it is necessary that such bacteriological examination should be conducted by or carried out under the immediate supervision of a qualified medical practitioner."

Seconded by Dr. KENT HUGHES.

Carried unanimously.

Mr. A. L. KENNY, Honorary Surgeon Diseases Eye, Ear, Nose, and Throat, St. Vincent's Hospital, Melbourne, showed the following cases:—

1. Mrs. M., widow, *et. 44*.—Married four years ten months, widow sixteen years; during married life three miscarriages, no children. Great loss of hair; no skin eruption; no other signs of syphilis. For twelve years has had a shallow ulcer on tip of nose, commencing originally as a small black spot. As it heals in one place (usually towards the tip) it very slowly spreads upwards, bleeds occasionally; edges flat, and not hard or thickened, but rather bluish; surface of ulcer fairly smooth, pale pink in colour, not granular,

very slight secretion. Pain, especially at root of nose and on forehead. History non-tubercular. Has been on anti-syphilitic treatment for three months, with no marked improvement. Ulcer less than threepenny-piece in size. Members present regarded the case as most likely one of tubercular lupus. The absence of any tendency to involve the deeper structures and the slow increase negating syphilis or rodent ulcer.

2. E. J. O., boy, aged thirteen months. At age of six or eight months parents noticed an enlargement at upper and inner angle of left orbit, which has increased very little since. At upper and inner angle of left orbit can be felt a hard tumour the size of a small marble, not tender, fixed, very hard, not interfering in any way with the eyeball. The majority of the members considered it to be an exostosis; a few regarded it as a dermoid cyst.

3. M. B., married woman, aged 40 (?), was shown with a number of translucent cysts along the margins of the eyelids and at the commissures; the largest about the size of a pea at the outer commissure of the right eye. They involved skin only, and were unconnected with the Meibomian glands or other structures of the eyelids. There was a single small cyst of same nature in left groin.

Dr. A. JEFFREYS WOOD, Hon. Physician to the Children's Hospital, showed:—

1. A. B., *et. nine years*, female.—Congenital syphilis, with Hutchinson's teeth. On breast up to 18 months; snuffles, and rash on buttocks, about the sixth week, lasting for four weeks. Was kept on mercury for six weeks. Had P.N.g.s. removed in February, 1895. Now has large and protuberant frontal eminences. Scars at the angles of mouth; the two upper permanent incisor teeth are dwarfed, peg-shaped, centrally-notched, with erosion of enamel at the apex of the peg. The left lower central incisor is also very narrow, notched, and widely separated from its fellow central incisor. The family history is as follows: Eight children have been born alive, and all are living. Three boys and two girls were born before our patient, and none of them showed a trace of specific trouble. In 1886, whilst carrying this child, the mother was ill with what she called low fever for six weeks. After our patient's birth a boy was born, apparently healthy in every way. Then two miscarriages followed, and then, in 1892, or six years after our patient's birth, another live child was born, and she also presented the typical signs of congenital syphilis. In June last she had a nasty sloughing gingivitis confined to the gum round the lower central incisors. A fall from a swing knocked out the teeth, and the gum healed soon after.

2. A. T., *et. eight weeks*.—This child was born with his two lower central incisors well through the gum. When seven days old the mother noticed that there was an ulcer beneath the tongue. This ulcer, caused by the presence of the teeth, increased in size for five weeks, but during the last fortnight is showing signs of improvement. A well-marked specific rash was present on the buttocks at four weeks of age, and a specific rhinitis was also a marked symptom. These symptoms have both improved under treatment by a mercurial binder. When the two upper incisors are present, the nipple often suffers considerable injury, and the question of extraction of the teeth or weaning is often a serious one.

Fourcheimer and a Frenchman named Magitot both recommend that these teeth should not be extracted, several children having died from hæmorrhage following extraction of premature teeth. They are chiefly associated with syphilis. The lower incisors are

covered by the tongue during suckling, so that the nipple escapes injury, whilst the tongue is apt to exhibit a frenal ulcer.

The following resolutions of the joint committee were then placed before the meeting:—

RESOLUTIONS OF DELEGATES *re* MELBOURNE HOSPITAL ELECTIONS.

1. "That the present system of election of Honorary Medical Officers of the Melbourne Hospital is unsatisfactory."

2. Suggested Reforms: (a) "That an age tenure is desirable, and that the retiring age be 60 years. It is submitted for the consideration of the Societies whether it is, or is not, desirable to fix a time tenure of 25 years for members of the in-patient staff. (These proposals not to apply to members at present on the senior staff.) (b) That the candidates for vacancies on the senior staff be selected from the junior staff."

3. "That all vacancies in the honorary medical offices be filled by election at the hands of life governors and subscribers who have subscribed a total sum of £3 at any time or times during the four years preceding an election."

4. "In the event of these resolutions being endorsed by the Society, the Conference of Delegates be empowered to take such action as it may deem necessary to give effect to them."

As they had been circulated on the previous Monday, their consideration was postponed for a month. The meeting then adjourned.

VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ordinary monthly meeting was held in the Austral Salon on Wednesday evening, November 27th, at 8 p.m. The vice-president, Dr. O'Sullivan, was in the chair, and there were present Drs. Mullen, McAdam, Nihill, Springthorpe, Kenny, Hamilton, Cuscaden, A. V. Anderson, and Tymms.

The minutes of last meeting were read and confirmed.

The resolutions of the delegates from the Branch of the Medical Society of Victoria and the Melbourne Medical Association *re* the mode of election of the Melbourne Hospital staff were then considered. After considerable discussion, the members present agreed with Resolution 1 (that the present system is unsatisfactory), modified it in the direction of recommending either an age tenure up to 60 or a maximum of service of 25 years, agreed that vacancies on the In-patient Staff be filled from the Out-patient Staff, decided to omit any reference to the electing body, and ordered that the resolutions thus carried be forwarded to the Conference of Delegates with the request that they report what further action they deemed it advisable should be taken in the matter.

Dr. MULLEN then read the report of the Library and Rooms Committee. It was to the effect that the Melbourne Medical Association and the Medical Defence Association representatives were agreed as to the desirability of obtaining joint accommodation, and that steps were being taken to secure such to the satisfaction of all concerned.

Upon the motion of Dr. MCADAM, seconded by Dr. CUSCADEN, the Report was adopted, and the committee

asked to continue their search, and report in due course.

Dr. SPRINGTHORPE then read his paper.

A CASE OF DRUG RASH.

By J. W. SPRINGTHORPE, M.D., PHYSICIAN TO THE MELBOURNE HOSPITAL.

NURSE D., *et.* 20, admitted November 8, 1895, influenza being then prevalent amongst the nursing staff, and patient herself having nursed in the diphtheria ward. Her symptoms pointed rather to febrile influenza, viz., sore throat, dysphagia, occipital headache, lumbar pain, general tiredness, and some coryza. T. 100·8°, P. 108, R. 16. There was, however, a (?) patch of membrane on the right tonsil, and a slight purpuric rash across the neck under the chin, with some tenderness. Microscopic examination of the secretion left the case in doubt, and, pending bacteriological cultivation, House Physician Dr. Green injected 10cc. B. & W.'s anti-toxin, spraying the throat with a weak carbolic solution. For insomnia that night and each of the two following, patient took chloral-amide gr. xx. On the 9th there was a large grey slough on the tonsil, and the small red discrete stains had spread to the chest and left armpit. T. 103·6°, without any lung complication or albuminuria; 5cc. of Schering's anti-toxin injected, and Quin. Sulph. gr. x. administered. On the 10th the anti-toxin was repeated, the local and general condition becoming more severe. On the 11th I saw the patient for the first time. The petechial stains were then present beneath the chin, in both axillæ, above each elbow, in a broad band across each flank, and, faintly, on the ankles, lumbar and scapular regions. A new, but also symmetrical, rash, of an erythematous nature had, however, made its appearance. There was a flush on each malar bone, a deep-red circumscribed flush on each olecranon, and a faint redness over the insteps, which had extended up to the knees during the night. There was a similar reddening of the hard and soft palate, uvula, and pharynx, with some swelling, and an irritable condition of the tongue. Urine free from albumen; cultures disclosed no diphtheritic bacilli. By the 12th the erythema was at its maximum, whilst the petechial rash was already declining. The whole face was suffused; both axillæ and flanks were erythematous, as well as petechial, whilst the olecrana, the styloid processes of both ulnæ, the carpus and ulnar surface of each 5th metacarpal region up to the metacarpo-phalangeal joint (especially of the right hand), as well as second and third

metacarpo-phalangeal joints, were the seats of a vivid, sharply-defined redness. The palms also were flushed. The hard and soft palate and throat were similarly intensely infected, and the tongue similarly red, irritable and shiny. The erythematous patches were burning, but not itching, and almost free from swelling. The slough on the tonsil persisted, and the temperature remained between 101° and 103° . The lungs continued unaffected, the urine free from albumen, and bacteriological examination shewed that the blood was sterile. Patient complained, however, of some paresis and pain on flexing the fingers, and in the occipital region on moving the head, and the shafts of the mid-first phalanges were noticeably swollen and shiny. Thence onwards the symptoms gradually abated. On the 13th the rash had almost left the hands, though a faint blush and some slight oedema remained on the right; flexion was still weak and painful, and the neck-pain even more severe. There was a faint blush, with a purpuric element and slight oedema on both ankles, in both axillæ, both iliac regions, and marked venous staining appeared on the backs of both hands. The throat was much less infected, but the tongue was still reddened and shiny, and the temperature remained 104° - 102° . On the 14th it was noted that the rash had practically left the neck; the back of the neck was much easier. There was a faint localised blush on the olecrana, the styloid processes, and the middle knuckles, and a faint petechial rash on both insteps. The tongue was still denuded and red; the fingers still swollen between the joints, and still slight pain and stiffness on moving fingers, wrists, and elbows. T. 102.4° , P. 180, R. 32. Lungs clear; heart bruit de galop; urine free from albumen; still slight superficial slough on the tonsil; otherwise the throat almost well. On the 15th the faint blush was scarcely noticeable. The hands still stiff, and the seat of fine desquamation. The throat and palate clear. T. 102° - 100° , P. 100, R. 28. Several small bullæ, however, appeared on the lower lip, and lasted several days before the scabs came off. On the 16th the skin was free from petechiæ; the tongue clean and moistening; the dorsal veins still large and prominent; all stiffness and swelling gone; some slight scaling at the elbows. T. 100.4° - 98.8° , P. 100, R. 24. Convalescence followed without interruption, and patient was discharged on November 23, 1895.

Remarks.—We are justified, I think, in concluding that there was no diphtheria in the present case. At the outset it was probably influenzal, though the sterility of the blood later on is strong evidence that the then pyrexia was

due to some other cause. The interesting feature, however, lies in the two rashes, which were distinct in onset if not in origin. Any differential diagnosis as to the cause must take into consideration the questions of influenza, anti-toxin, chloralamide, or other unknown agent.

1. Regarding influenza, cutaneous complications of an erythematous, urticarial, and papular nature have been noticed with some frequency, whilst the petechial element is well known as a complication of erythema multiforme, and of infectious diseases generally, such as scarlatina, measles, variola, &c. I am of opinion, however, that the time and character of eruption, the mild nature of the influenzal attack, the sterility of the blood, and the general status practically negative any influenzal origin. If, however, the petechial rash were really present (as it seems to have been) before any drugs were administered, its causation at least is rendered still more obscure. I have certainly noted blood changes in influenza, but they have been in severe cases, and attended with the presence of the bacilli, and I have never seen any punctiform hæmorrhage into the skin, though hæmorrhage from mucous surfaces is exceedingly common.

2. That anti-toxin can produce a rash is also well known, and the present case had three doses—one of B. and W.'s preparation, and two of Schering's. But the anti-toxin rash almost always follows a week or more after the injection, and is generally urticarial. It is improbable, therefore, that the present was of such origin.

3. There was no apparent germ cause for the erythema, the blood being sterile.

4. We are left, then, with the suggestion that the erythematous rash, at any rate, was of chloralamide origin. That some chloral compound might be the cause struck me from the suggestive likeness of the rash to the eruption described by Hutchinson, and figured in Sajous' *Annual*, 1891, vol. iv., A. 6. On the same page is mentioned a case reported by Dr. Burney Yeo to the *B. M. J.*, March 8th, 1890, in which 2 doses of 40 grains of chloralamide at intervals of 4 hours, produced in a man aged 40, suffering from aneurism, an inflammation of the face, coryza, stomatitis, slight albuminuria and pyrexia, which continued for a week, during which the skin affection spread rapidly over the whole body, and ended with profuse desquamation, like that of exfoliative dermatitis. Umpfenbach also (*Therap. Monat.*, Berlin, Feb., 1890) noted five instances of skin rash in 55 consecutive cases, the eruption being erythematous, and recalling the rash of chloral. These are the only instances that I can

find quoted out of many hundred administrations, the rarity of such result practically proving that the main factor is the idiosyncrasy of the patient. The marked resemblance of the present rash to those thus produced makes it, however, highly probable that the same drug was operative in the present case, even in comparatively small doses, owing probably to some antecedent blood stasis, which had already produced the slight symmetrical petechiæ.

Whatever the cause, it is certain that the effects were produced through the medium of the vasomotor system. That the local nervous supply was affected was shown by the pain paresis and stiffness. We can thus account for the localised areas of hyperæmia, and it is of course possible that these represent damage done locally by the influenzal attack, though the sites correspond to those given as the favourite seats of erythema multiforme of non-influenzal origin. According to Brooke (loc. cit., page 8), the further effect in all such cases is due to local peculiarities in the skin tissues. Thus, he says, a simple erythematous eruption becomes vesicular when the resistance of the epithelium is very slight. When a spastic element concurs it becomes papular or urticarial; when a passive venous condition supervenes we have purpuric rashes, or œdema. In the present case all these results were present, except the papules.

Dr. NIHILL regarded these cases as specially interesting, as warning against what might occur at any time. Perhaps the petechial rash might be explained on a rheumatic basis.

Dr. MCADAM agreed that idiosyncrasy has a practical as well as a scientific interest. It appeared to be variable, as well as fixed. He instanced a case of extensive bromide acne in a patient after operation, in whom similar doses had previously never had any such effect.

The CHAIRMAN considered these cases as amongst the most interesting in therapeutics, and wondered how they had so long escaped notice. We should always remember that results varied with the state of the patient.

In reply, Dr. SPRINGTHORPE claimed probability, not certainty. There was no evidence of rheumatism. Such a case threw a flood of light on the action of drugs—gave us a sight of the actual result in visible parts, from which we could imagine the internal effects. Here we had blood turned on, as by a tap, to certain local areas, with secondary results, as described by Brooke, due to local peculiarities. As regards the molecular effects of the active ingredients upon the tissues themselves, we could only conjecture. How complex the problem could be gathered from the suggestive computation of Weismann that a single red blood corpuscle contained probably some 750 thousand millions of living molecules—more than the number of inhabitants in the Continent of Africa.

Dr. McAdam then read his paper.

NOTES OF A CASE OF INTRACTABLE EPILEPSY MUCH RELIEVED BY BORAX.

R. L. MCADAM, B.A., M.D., CH.B. (UNIV. DUB.), OF ST. KILDA (MELBOURNE).

I WAS called to see J. S., a boy of 9 years old, suffering from epilepsy, on the 17th September, 1895. His parents were of neurotic type, but had never markedly suffered from nervous trouble of any kind. The boy was the eldest of a family of three children; the other members being girls aged 5 and 7 years respectively, and apparently as yet quite healthy.

I learned that the patient first became affected with the disease when about 7 years old. He was walking with his mother in the street, when, all at once, and without any apparent reason, he started to run rapidly away. When his mother overtook him she noticed that he looked very strange, and enquired why he had started off. He replied that he had no recollection of having done so at all. He complained, too, that his head ached, and that he felt sick. It was only a short while after this occurrence that regular seizures of the ordinary kind set in. Gradually these attacks grew more severe and more numerous, and continued to trouble the patient for a period of five months. During this time the boy was once or twice so bad that his life was despaired of. He had the benefit of medical treatment throughout his illness, but no remedies seemed to check the violence of the affection. At length, when hope had well nigh gone, a gradual improvement set in; the seizures diminished in severity and number, and finally, after a time, left him. An interval of two years now occurred, during which he appears to have enjoyed good health and complete immunity from attack. This period of freedom from illness terminated about the end of last August. He began to complain of headache, and vomited several times. These phenomena proved to be the precursors of an impending nerve-storm, which quickly set in with even more than its old violence and severity.

The lad was tall for his age, but of slender build, and pale and thin. There was a slight scar over his left eyebrow, the result, I was told, of an instrumental birth. The skull presented no other features of note. The intelligence was of a rather low order, and the speech was hesitating, indistinct, and hard to understand. The tongue was protruded with difficulty; it did not appear to have been bitten. The right arm and leg were markedly deficient in muscular power, as compared with the corres-

ponding limbs on the left, though these latter were themselves notably below par in point of strength. The knee-jerk was badly marked in both legs, the right more particularly, while the plantar and other superficial reflexes were sluggish.

The heart was rapid, the pulse weak and compressible. Respiration was slightly hurried, but the lungs were normal. There was a foul tongue, while marked anorexia and constipation were complained of. The urine was healthy in all respects.

Such, in brief, was the condition of the patient when first I saw him, and all that was needed in order to complete the clinical picture was to witness the occurrence of a seizure. This opportunity was afforded, for I had scarcely finished gleaning the above particulars when an attack came on. While I was looking at him his expression quickly altered; his face paled still more, and became set and rigid; his pupils dilated; he gave vent to a cry that sounded as if it were forced from him by some overmastering terror. His head slowly rotated towards the left, then his muscles became tense and fixed, and his whole attitude suggestive of great distress. Convulsive movements set in after a few seconds, and he was tossed and agitated most violently for fully a minute, thereafter falling into a state of complete stupor. On this occasion he passed urine involuntarily, and I was told that this was a common occurrence, varied at times by the expulsion of feces as well. The attacks occurred during sleep, as well as in the waking hours.

I put the patient on large doses of bromide of potassium, and gave directions to the mother to make a record of every seizure. In less than three days eighty attacks occurred, all of great severity. Though I increased the dose of bromide, it did not appear to exercise the slightest controlling influence over the disease. Iodide of potassium, arsenic, antipyrin, nitrate of silver, were all in turn tried, but the results in each case were equally futile. During all this time the patient was manifestly going down hill, and could scarcely be got to swallow any food—liquid or solid. His mental powers, too, had sunk so low that he was quite an imbecile, and he lay upon the pillow, saliva dribbling constantly from his mouth, as if he were a teething infant. At last I determined to make trial of borax, and ordered the patient 10-grain doses three times a day. The first day he took the new drug the seizures suddenly fell from fifteen the previous day to three, while their severity was so much diminished that the mother told me they did not seem like the same

thing. The next day the improvement was still more marked, and on the third after the commencement of the borax treatment he had complete freedom from attack, and seemed brighter and better than he had been for months. Without direction from me the borax failed to be given next day, and the result was that the boy had numerous seizures, and got just as bad as before. On the resumption of the drug, improvement again took place, and has steadily continued ever since. The patient still has attacks, but they are few in number and quite different in character, while the appetite is good, the intelligence much better, the power of speech partly restored, the general condition greatly improved. The boy has now been taking the drug for over three weeks, and during that time the effect produced has been entirely satisfactory.

I have brought the case before you to-night mainly to bespeak a more extended trial of borax in the treatment of epilepsy, especially when bromides prove useless. Often, when this latter event happens, there begins a weary round of searching for something which will give relief, and drug after drug is tried, only to be rejected. Borax, in my opinion, is the drug most worthy to rank next the bromides in the treatment of epilepsy. Then, again, in the case under review, none of those untoward effects which are sometimes said to follow the use of borax showed themselves. True, the boy only took 30 grains per diem at first, but the dose has gradually been raised until he is now using 45 grains daily. This dose, relatively to his age, is, however, a fairly large one, and I am in hopes that it will not be necessary to exceed it.

I may refer those interested in the borax treatment to an interesting report by Féré, summarised in the epitome of the *British Medical Journal* of October 12.

Dr. SPRINGTHORPE hoped that Dr. McAdam would report later on as to the final effect of the borax. It was specially difficult to assess the value of drugs in epilepsy. Many improved with a change, even with the omission of bromides. The treatment of the causal irritant was quite as important as the administration of the specific sedative. Experiments on animals showed borax had sedative powers, but they were very feeble, and large doses were required. Of course, idiosyncrasy might modify the result. It might, however, be useful in two other ways—firstly, from its disinfectant action in the gastro-intestine modifying the soluble products of the "intestinal flora"; or, secondly, from the soda acting as an alkali in cases of lithiasis and the like. He had satisfied himself that there was often a hepatic, or lithiasis element in epilepsy, and had reported a number of cases which were wonderfully improved by alkalies and cholagogues, etc., even after the failure of pot. brom. He believed that it was probably thus that borax acted. It might interest members to be

reminded that H. C. Wood considered it almost worthless; Gowers, as distinctly useful where Bromides failed; Da Costa, as suggested in nocturnal, and Mairé in organic epilepsy. After a fairly large experience of trephining, he was not very sanguine as to the results of operation.

Dr. NIBILL welcomed any record of improvement in such disease. In out-patient practice he found the mixed bromides give the best results.

Dr. KENNY gave it as the result of his experience and observation that he had personally never met a case in which the reflex irritant was eye, ear, or nose trouble.

The CHAIRMAN deplored the routine bromide treatment. It was unscientific in that it paid no attention to the cause. He believed that, in women especially, epilepsy was frequently produced by toxins set free from the intestine. He quoted a case in which the adoption of vegetable diet had proved very effective.

Dr. MCADAM, in reply, thanked members. He would keep the case, if possible, under observation. He admitted that borax was only occasionally effective, but his seemed one of the exceptional cases.

SPECIMENS.

Dr. SPRINGTHORPE then exhibited the following specimens:—

1. Hypertrophied bladder with fleshy growth at the base, and granular left kidney, with two separate pelves and ureters. Patient had died comatose soon after admission, having passed almost pure blood and a very small quantity of urine.

2. Sternum with attached aneurism above the sinuses of Valsalva, eroding through the sternum. The case had been under observation since August, 1892. There had been extensive atheroma, due to alcoholic excess. Three very severe blows on the inter-mammary sternum had evidently caused adhesion of the first part of the aorta to the sternum. In six months the sternum was eroded through, without any pain. When first seen the part outside was equal in size to half a cricket ball, the skin ulcerated, the walls not thickened, and the danger that of early rupture. In position and appearance the aneurism was very like that figured on pages 282-283, Byron Bramwell's "Diseases of the Heart." There were marked changes in heart action and sounds, but no serious regurgitation. Twice, one or more pints of fluid were removed from the right pleura. Patient was kept absolutely at rest on restricted diet for ten months, and for nine months was taking 180 grams of pot. iod. daily. Four months later he was discharged with such a thick external wall as to remove all then danger of rupture, and in other respects matters were satisfactorily quiescent. In July, 1894, he was again admitted, having received another severe blow on the tumour whilst lying asleep. Below, and to the right of the old thickening, was a fresh pulsating tumour, as big as a walnut. Careful examination showed that it was separate from the blood-stream; and in due course, a traumatic blood cyst having been diagnosed, a fine needle was introduced, and some $\frac{1}{2}$ oz. of blood-stained fluid drawn off. Gradually, however, the true aneurismal swelling pushed itself forward at this second seat of injury, and the blood-stream could once more be felt immediately beneath the finger. He was under treatment as an O.P. for some twelve months, when he was taken into hospital for the third time, and placed on 30 ozs. of milk daily, and large doses of pot. iod. A second clot became organised, but after a few months this began to break down, and blood oozed from the surface. On one occasion, owing to partial dislocation, direct communication was opened into the

aorta, and some six pints of arterial blood swamped his bed. Afterwards, however, the clot acted efficiently as a plug, and he died finally of asthenia and mild sepsis. *Post-mortem*, the aorta was generally atheromatous, and dilated irregularly from the sinuses of Valsalva up to the arch, opening anteriorly through the sternum by an aperture about the size of a five-shilling-piece, the left half of which was closed by a thick, almost cartilaginous clot, and the rest by a friable, more recent, organised clot. Posteriorly the pulmonary artery was pressed upon, and the right ventricle dilated without noticeable hypertrophy. Both mitral and aortic orifices were patent, but the left ventricle was not markedly dilated or hypertrophied. Both lungs were healthy, but extensively adherent to the chest walls, especially around the aneurism.

The points of interest are (a) the site of the aneurism, evidently the result of traumatic adhesion of an atheromatous aorta to the sternum; (b) the erosion through the sternum in six months without pain; (c) the results of fourteen months' rest and nine months' pot. iod. gr. 180 daily, practical arrest by a thick organised clot, in place of imminent danger of death from rupture; (d) the results of another injury over the seat of aneurism—firstly, a blood cyst outside, and secondly, a fresh aneurismal swelling at the border of the still efficient clot; (e) the formation of a coagulum there under the influence of rest, low diet, and pot. iod. its inability to withstand the aortic pressure, with consequent skin necrosis, decomposition of clot beginning from without, local cellulitis, oozing of aortic blood, partial dislocation, and profuse hemorrhage, and final death from asthenia and slight sepsis.

PROCEEDINGS OF OTHER SOCIETIES.

BALLARAT DISTRICT MEDICAL SOCIETY.

THE first quarterly meeting of the Society was held on the 31st October, at 8.30 p.m. Present—The President (Dr. Pinnock), Drs. Mitchell, Salmon, Champion, Usher, Cussen, Guthrie, and the Hon. Sec. (Dr. Scott.) Apologies for absence were received from Drs. Ochiltree, Jordan, and Palmer.

After the general correspondence had been dealt with, and a question of ethics discussed,

Dr. SALMON showed a man on whom he had operated for fracture of patella four months after the accident, and read notes of the case.

Dr. PALMER (in absentia) showed a patient suffering from Molluscum Fibrosum, and notes of the case were read for him by the Hon. Sec. Photographs of the case at various stages of the treatment were also shown.

Dr. MITCHELL read notes of a case of aneurism, and showed the specimen.

Dr. CHAMPION read notes of a case of sarcoma of the kidney, and showed the specimen.

Dr. SALMON read notes of a case of dermoid cyst obstructing labour, in which he aspirated the cyst, which was in Douglas's pouch, before delivery could be effected. The patient made a perfect recovery.

Dr. SCOTT read a paper on "Operative Treatment of Fracture of the Patella," and discussed operative and non-operative treatment, according to the causation of the accident, whether due to direct or indirect violence.

Remarks by the President, Drs. Salmon and Champion.

Dr. SCOTT replied.

NOTES ON A CASE OF SARCOMA OF KIDNEY.

E. CHAMPION, M.B., CH.B., RESIDENT PHYSICIAN, BALLARAT HOSPITAL.

J. McI., *æt.* 76, admitted 16th August, 1895. On admission, he complained of dyspnoea, swelling of feet and legs, and general weakness. He also stated that he had been passing clots of blood in his urine. For last three years he had to get up at night on an average four times. For the last eighteen months he had been occasionally passing clots of blood in his urine, and, at times, when micturating, the water would stop suddenly. He never complained of pain during or after micturition, and passed a good quantity of water in twenty-four hours. On examination, a loud systolic bruit was heard in mitral area, and it was well-conducted into axilla. The lungs were emphysematous, but no adventitious sounds were heard. Was cyanosed on admission, and there was œdema of the feet and legs. The urine was of a smoky colour, *sp. gr.* 1012; reaction neutral; contained blood and albumen, and there was a slight flocculent deposit. Patient was placed on a cardiac tonic, and improved slightly, but his urine varied, sometimes containing blood, and sometimes being clear. There was no cystitis, and no stone was detected on sounding. On the 28th he complained of a dull, aching pain across the back, worse on the right side, and running round the side down towards the groin; there was also retention of urine. Catheter was passed, and a few ounces of red urine drawn off, also some clots. On 29th urine again had to be drawn off. There was a good deal of sediment, so the bladder was washed out, but the urine had no ammoniacal odour. After this, urine was passed naturally, but he still complained of pain in the right lumbar region. On the evening of the 30th he became delirious, and dulness was detected at the left base of lung, also increased resonance and fremitus, and tubular breathing. He continued in a delirious state until 2nd September, when he died.

Post-mortem 3rd September. Right kidney enlarged, capsule adherent, surface granular, cortex narrowed, pyramids indistinct, calyces dilated, and containing a soft, shreddy, pulpy mass, about size of a hen's egg, and confined to upper part of kidney; there were several hemorrhages in the substance of mass. Ureter dilated. Left kidney very large, adherent capsule, cortex narrow, pyramids unravell'd, substance tough; at upper part there was much hardening, and distinct grey streaks ran through

substance of the kidney towards its pelvis. Heart: Thickened and rigid mitral valves; calcareous deposit round bases of aortic cusps. Pleuræ contained each half-a-pint of fluid, clear; recent lymph on left lower lobe; red hepatization of left lower lobe and of greater part of right lower lobe. Prostate very slightly enlarged.

NOTES ON A CASE OF AORTIC ANEURISM.

J. T. MITCHELL, M.D. CH.M., HONORARY PHYSICIAN, BALLARAT HOSPITAL.

E. H., aged 63, first came under my care on October 2, 1894. She had been a very active woman, engaged for thirty years in monthly nursing. She had consulted two or three doctors during the last few years for "indigestion" and "palpitation," without referring to any special cardiac symptoms. For several weeks past she had suffered a good deal of pain in her right side, below the shoulder blade, in the axillary line. She had also noticed a fulness at the root of the neck, which had for the last two months been distinctly rounded and soft. When I saw her the aneurism shewed in the supra-sternal notch as a rounded tumour about the size of half a small hen's-egg, of a boggy consistence, and with obscure pulsation. In less than a month it had doubled in size, and become lobulated, one small lobule being very near the skin, and giving the impression that but little more than a layer of parchment was between the bloodstream and the surface. About this time Dr. Woinarski saw her with me, and confirmed the diagnosis. The pain in the side continued to be very severe, and at times the right, and occasionally the left arm, was affected with lancinating pains. On December 3 the pains became so acute that the patient was kept under the influence of opium more or less constantly for several weeks. On January 7, 1895, the aneurism was seen to be steadily enlarging towards the left, and pulsating in the middle line below the level of the second rib, the manubrium having been absorbed. A noticeable feature in the progress of the case was the manner in which the tumour altered in size and shape, being sometimes lobulated and sometimes smooth and rounded. Sometimes it seemed as if it must break through the skin that very day, and then in a few days it would be boggy and almost without pulsation. On April 17 a small abscess formed between the tumour and the skin, between the ends of the clavicles. This was opened, with antiseptic precautions, and did not heal for nearly six

weeks. During the time the abscess was open there were one or two small hæmorrhages, but it is not certain that the blood came from the aneurism. However, on August 17, the sac really did ulcerate through the skin at the level of the second rib, and hæmorrhages of from a teaspoonful to a wineglassful took place frequently for nine days, the wound being plugged by a clot from the first. By the end of August the tumour had reached its maximum of enlargement, extending as high as the larynx, which it covered, and being nearly four inches in breadth at its widest and most prominent part. On September 16th it bled freely, and I estimated the loss as at least half a pint. On the 20th bleeding began again, and there was a constant dribble from that time till her death. The wound was plugged by a clot the size of the ball of one's thumb, and the blood oozed up all round this. On the morning of October 1st a great gush of blood took place, and in two minutes the patient was dead—one year from the first observation, and more than six weeks after the sac had opened and was in constant communication with the external air. At the autopsy I found that the fibrinous clot closed an opening into the aneurism, which was exactly the size of half-a-crown. Two and a-half inches of the upper part of the sternum had disappeared, as had also the inner end of the left clavicle and of the right and left first ribs. The portion of the aneurism which projected into the neck was almost filled with firm, laminated fibrinous clot, which was difficult to dislodge, and was in many places firmly adherent to the sac walls.

The specimen was exhibited showing the aneurismal dilatation of the aortic arch, beginning one inch from the heart and rapidly increasing till a diameter of three and a-half inches was reached, which was maintained throughout the whole of the arch. There was some bulging in parts, but on the whole the contour of the arch was regular. The extreme width of the arch was slightly over seven inches. The innominate artery was funnel-shaped as it left the aorta, but the common carotid and subclavian arteries were normal in size and shape. From the anterior surface of the arch, and close below the origin of the innominate artery, sprang the aneurismal sac, which could be seen in the neck, and which eroded the manubrium. It was the size of a large orange, somewhat sacculated in form, and having a rather constricted neck. This would account for the ease with which the blood-clots formed in this portion of the aneurism. The specimen was sent to the museum of the Melbourne University.

DERMOID TUMOUR IN DOUGLAS' POUCH OBSTRUCTING LABOUR.

HARRY R. SALMON, M.B., CH.B., HON. PHYSICIAN BALLARAT HOSPITAL.

MRS. G., aged 47; three children; 12 years since last confinement.

Called to see the patient, who had been in labour 24 hours. On examination, found os apparently in anterior portion of vaginal roof, about the size of a five shilling piece, thin and dilatable; also a fluctuating tumour presenting posteriorly. By combined vaginal and rectal examination this was found to be lying in Douglas' pouch, and was obstructing the passage of the head. Decided that aspiration was necessary, and with assistance of Dr. Woinarski, who administered chloroform, about a pint of thick, yellow fluid (which at first looked like pus) was removed per vaginam by means of the aspirator. The sac was completely emptied. The head, which was then found to be in the third position, was rotated, and delivery completed by means of the long forceps. An iodoform pessary was inserted twice daily, and the patient made an uninterrupted recovery.

The fluid, on cooling, became solid, and bore the appearance of dripping.

I sent some for examination to Dr. Mollison, who reported it to consist of soft, yellowish-white, buttery material, easily melting, and being composed of fat. No hairs were found in it. There was no pus present. Patient stated, three days after delivery, that at her last confinement there was an obstruction, which the doctor removed by pushing it up out of the way.

One month after delivery I examined patient per vaginam and per rectum. All that could be found was some thickening of the interspace between the rectum and vagina.

Remarks.—There can be no doubt that the tumour was a dermoid, and the probability is that it was connected with the ovary.

There is also a strong probability that it will refill sooner or later, as the secreting lining membrane is likely to retain its vitality.

As the tumour was evidently strongly adherent in its position, should it refill, the treatment I should pursue would be to aspirate again. If a case occurred again under similar circumstances, I should advise aspiration per rectum, for should the contents of the sac prove to be purulent trouble would probably arise from their mingling with the lochia.

OPERATIVE TREATMENT OF FRACTURE OF THE PATELLA.

ROBERT SCOTT, M.B., CH.M., HON. SURG. TO THE BALLARAT HOSPITAL.

THE subject of fracture of the patella is one of great interest in the surgical world—simple in its inception, and difficult to treat. When you tell your patient he has sustained a fracture of the kneecap it does not call up anything very terrible to his imagination, so that it comes on him with the greater shock when the probable results are made clear to him. Thus, the proper treatment of (to a lay mind) such a simple injury must always be of more than passing interest to the surgeon.

Non-operative treatment—i.e., immobilisation of the joint by the various methods in use—the back splint, Mead's plaster, plaster-of-paris, etc., do undoubtedly give excellent results sometimes. The cases in which you may with every confidence expect to obtain these results are, however, only those in which the injury has been due to *direct violence*. This has been clearly and ably shown in a recent paper on the subject by Dr. Fowler, and he follows the teaching of Professor Macewen, of Glasgow who, I well remember, in 1885, when I was Resident Surgeon in the Glasgow Royal Infirmary, demonstrated this fact clearly. His argument, which is borne out by the condition of the parts seen when the fracture is exposed, is that, in fractures caused by *direct violence*, the bone is broken by being suddenly and forcibly driven against the resisting condyles of the femur, but the fibrous layer covering the anterior surface of the patella is not torn. In these cases the fractured portions can be freely moved on each other, and when apposed crepitus is present. A case in point is that of a young man, nineteen years of age, W. R., a groom, who was kicked by a horse, and was brought to the Ballarat Hospital with a comminuted fracture of one patella. In a few days after the swelling had subsided he was treated by a back splint, and the portions were kept in apposition by figure-of-8 bandages. He made a rapid recovery, and left the hospital in six weeks, with firm bony union.

But when the fracture is due to *indirect violence* non-operative results are not so satisfactory. In these cases the injury is caused by a sudden strain. The man is falling, and in attempting to save himself the quadriceps muscle is over-stretched. The bone fractures as from the fulcrum over the condyles of the femur, and the fibrous layers over the bone

then give way, being stretched beyond their limit. These ruptured ends of fibrous tissue become entangled with the broken edges of the fragments, because, being over-stretched, they are unable to retract. In this way, distinct crepitus is prevented, and, just as in fracture of any other bone in the body, unless you can get perfect coaptation of the fragments, only fibrous union is the resultant.

Here, then, we are met face to face with the query: Is it better to suffer your patient to go through life with a maimed and practically useless limb, or to advise the operation, after pointing out to him the attendant risks, but with the certain assurance (except in exceptional cases of disease of the bone, which need hardly be taken into account), that he will have firm, bony union, and perfectly restored function. Surely, gentlemen, in these days of asepsis we should not hesitate. No doubt since Lister first suggested the operation in 1883 many limbs have been sacrificed, and many patients have recovered, after a long battle with suppuration, with a stiff joint; but the differences of the causation of the injury were then not so well known, and every fractured patella was unmercifully and indiscriminately laid open and wired, with the result that surgeons became scared of the operation, and after the "boom" subsided were content with the old methods.

As regards operative treatment, here we have a vastly different condition of things to deal with to what presents itself in any ordinary, simple or compound fracture in the long bones.

We must face the fact that the knee-joint is practically laid open. Now, as we all understand, the joint becomes filled with effusion very rapidly after the accident; therefore the first treatment is undoubtedly to some extent non-operative. We must delay operative measures until the inflammatory process has subsided. Therefore, at first, the patient is put to bed with the leg raised on a pillow, and the body raised by a back rest, so as to throw the rectus femoris out of action. Fomenta are applied, or a firm bandage, according to the amount of synovitis present. Usually about 14 days after the date of the accident operative measures can be proceeded with.

Various methods are recommended, and each operator has his own pet method. The initial proceedings are, however, similar. After having the skin rendered thoroughly aseptic—which can be done by repeated washings and scrubbing with perchloride solution during the first fortnight—the skin incision is made, either perpendicularly over the seat of fracture or by a U

incision, the lowest portion of the incision being just below the edge of the fracture on the lower portion of the patella, as recommended by Dr. Fowler.

The next procedure is to remove with great gentleness the more or less organised blood clot always present between the surfaces, and—what is most particular to ensure success, carefully clip away the torn fibrous aponeurosis that will be found overlapping the edges and preventing the fractured surfaces being accurately apposed. This can all be done without disturbing the fractured bone; the blood clot can be easily lifted out of its bed with some blunt instrument.

Then comes the question as to what is the best method of retaining the fragments in accurate position, so as to secure bony union, and this is the crux of the whole position.

Drilling, as formerly recommended, I believe to be quite unnecessary, and undoubtedly adds a greater danger in the after-progress of the case, as the fragments are disturbed to a great extent, and the presence of the wire is apt to set up caries. "*Tying*" we may set aside as impracticable, and, being subcutaneous, does not help to remove the cause of the failure in obtaining bony union.

Malgaigne's hooks have again come to the front in the original form and in modified forms, and no doubt good results have been obtained by them, fixing the points and screwing up the apparatus until the fractured portions are in position. But they appear to me unnecessarily cumbersome, and where one has *comminution* to deal with, would be very difficult to apply. The only cases in which *Malgaigne's* hooks appear suitable are in old-standing fractures where fibrous union has taken place, and where there is wide separation of the fragments; in fact, where an operation is undertaken secondarily. In recent cases it will be found very little force is required to keep the fragments in apposition, and the force required can be obtained without piercing the bone at all. The method, then, that I wish to bring before you is to pass a curved needle, threaded with aseptic silk or strong silkworm-gut through the ligamentum patellæ, close to the lower edge of the bone; pick up some fibres of the expansion of the vastus on the inner side of and close to the bone, then pass the needle through the rectus tendon close to the upper surface of the patella, and pick up some of the fibres of the vastus expansion on the outer side of and close to the bone, tying the two ends of the thread firmly together.

This method can be done without disturbing

the fragments to any great extent, and avoids leaving any foreign body which may be likely to set up caries of the bone. In this way also the fractured surfaces can be accurately apposed. The wound is then thoroughly cleansed, and closed by a few superficial sutures, a back splint applied, and the leg elevated on an inclined plane.

This method was adopted in the case I show you to-night. J. B., 39, admitted to hospital 7th September, 1894; operated 4th October, 1894. He sustained a comminuted fracture on the 6th September, 1894, while attempting a high kick at a football, overbalancing himself and making a violent effort to recover his equilibrium. On cutting down by vertical incision, found a transverse and longitudinal fracture dividing the bone into four unequal portions, transverse being about two-thirds from upper edge of the bone. It was found impossible to secure proper hold by drilling, and a platinum wire was passed through the soft parts in the way I describe. The wound healed by first intention, and he was up, and moving about the ward, when, from some unexplained cause, an attack of cellulitis came on in the lower part of the calf of the leg, and spread up to and above the knee. This attack retarded the convalescence, and interfered with the massage and passive motion. He, however, eventually recovered, and has now firm bony union and a useful leg. At present he is shearing, and averaging about 100 sheep a day.

Finally, then, I would say that operative treatment is never justifiable until all acute inflammatory swelling is past. In fractures due to *direct* violence, bony union is by no means uncommon; but in fractures due to *indirect* violence, and especially when little or no crepitus can be elicited, operative treatment, by one or other of the many methods in vogue, is the correct course to adopt, and the only one by which we can hope to restore to the limb its full function.

MEDICAL SOCIETY OF QUEENSLAND.

THE 107th general meeting was held on November 12th, 1895, in the Society's rooms, Brisbane. Present: Dr. Hill (President), Drs. Wheeler, Gibson, Love, Booth, Culpin, Ure, Clowes, and Ashworth. Visitors: Drs. Davidson and Halford.

Dr. BOOTH moved,—"That the Council be instructed to confer with the Council of the Queensland Branch of the British Medical Association as to the advisability of drawing up a scale of medical fees."

This was seconded by Dr. URE, and, after some discussion, the motion was carried.

Dr. URE read his paper on "Septicæmia with Recent Cases," which will be published in an early issue.

Dr. LOVE discussed the definition of sæpræmia as a disease produced by the absorption of a poisonous dose of the chemical products of putrefaction. He remarked on the slow onset of the paralysis observed in one of the cases.

Dr. GIBSON cordially agreed with the use of iron in these cases, as in erysipelas and other septic diseases. He preferred the protochloride. He thought that the slight diastolic murmur observed in one of the cases made the diagnosis of ulcerative endocarditis less probable.

Dr. CLOWES said that it was of the first importance to thoroughly clean out the uterus in these cases. Occasionally an alarming rise of temperature would follow the operation, due to the extra dose of poison absorbed as a consequence of the manipulation.

Dr. HALFORD alluded to a fatal case of tetanus following a miscarriage, in which the use of anti-toxin appeared to have no influence on the symptoms. He agreed with the definition of sæpræmia and septicæmia.

Dr. URE thanked the members for their kind reception of his paper. He believed that the chemical products, and not the microbes, were absorbed in sæpræmia as in diphtheria. He always gave the permittate of iron in very large (half-drachm) doses, that compound being better born by the stomach than the perchloride. He thought that the gradual onset of the paralysis might be explained by a small embolus causing the formation of a gradually-increasing thrombosis. He exhibited a very interesting mortality chart of England and Wales, showing how the mortality from pyæmia, puerperal fever, erysipelas, and cardiac rheumatism rose simultaneously to a great height in the year 1874.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

THE following gentlemen, having presented their diplomas, have been duly registered as legally qualified medical practitioners by the respective boards:—

NEW SOUTH WALES.

Maloney, William Robert Nuttall, M.R.O.S. Eng. 1886; L.S.A. Lond. 1886.
Kearney, Charles James, L.R.O.P. Lond. 1895; M.R.O.S. Eng. 1894.
Forayth, William Alexander, M.B. et B.S. Melb. 1895.

For Additional Registration:

Finlay, Sinclair, F.R.C.S. Irel. 1895.
Barrington, Fourness, F.R.O.S. Eng. 1894.
Connor, Francis Gillies, M.D. Edin. 1895.

NEW ZEALAND.

Fox, Robert Algernon, M.B. M.S. Edin.
Hood, James Crockett, M.D., M.S. 1884, M.O. 1885, Roy. Univ. Irel.

VICTORIA.

Gamble, Elfreda Hilda, M.B. Melb. 1895.
Greig, Janet Lindsay, M.B. Melb. 1895.
Halley, Ida Gertrude Margaret, M.B. Melb. 1895.
Deane, Edward Wilkinson, M.B. Melb. 1895.
Chenhall, Alfred Nicholas, M.B. Melb. 1895.
Macgowan, Ernest Thorburn, M.B. Melb. 1895.
Graham, Edward Alfred, M.B. Melb. 1895.
Forster, Arthur Edward Blackett, M.B. Melb. 1895.

WESTERN AUSTRALIA.

Barber, George Walter, M.R.O.S. Eng., L.R.O.P. Lond.

NOTICES.

All communications intended for publication may be addressed "The Editor, Australasian Medical Gazette, 13 Castlereagh Street, Sydney," or to the Branch Editors for the other colonies.

Dr. Knaggs is the Editor appointed by the proprietors. The Editors appointed by the other Branches of the British Medical Association are: Dr. F. C. Connolly, South Brisbane; Dr. J. W. Springthorpe, Melbourne; Dr. H. Swift, Adelaide.

The Australasian Medical Gazette and the British Medical Journal are supplied to all Financial Members of the New South Wales, South Australian, and Victorian Branches Free of Cost.

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New South Wales, Dr. Crago, 34 College Street Sydney; South Australia, Dr. H. Swift, Hon. Sec., Adelaide; Victoria, Dr. McAdam, St. Kilda, Melbourne.

SPECIAL NOTICE.—ORIGINAL ARTICLES FOR INSERTION IN THIS "GAZETTE" SHOULD REACH THE EDITOR ON THE 3RD, OTHER COMMUNICATIONS NOT LATER THAN THE 7TH, AND CORRECTED PROOFS ON THE 12TH OF EACH MONTH. FAILING THIS, THE EDITOR WILL NOT BE RESPONSIBLE FOR NON-INSERTION OR PRINTERS' ERRORS. VERY LENGTHY COMMUNICATIONS WILL ONLY BE INSERTED WHEN SPACE PERMITS.

THE AUSTRALASIAN MEDICAL GAZETTE.

SYDNEY, DECEMBER 20, 1895.

EDITORIALS.

A PROPOSED MATERNITY HOSPITAL FOR SYDNEY.

On Friday, 22nd November, a deputation from the Women's Dispensary, Hay-street, said to be the outcome of a public meeting, waited upon the Colonial Secretary of New South Wales to ask the Government for a piece of land on which to erect a new Maternity Hospital; also to request a donation of pound for pound for any money subscribed for the same purpose.

Some of the Directors and Honorary Medical Officers of the Benevolent Society of New South Wales connected with that Institution also attended in the interests of the Asylum to advocate its prior claims for similar purposes.

There can be little doubt that a pressing

necessity exists for the establishment of a Lying-in Home for the City of Sydney. There is, as explained by the deputation from the Benevolent Asylum, a lying-in department in connection with that Institution, but, unfortunately, its usefulness is seriously impaired by the fact that the present buildings are wholly inadequate. For many years past the directors of the Benevolent Asylum have been fully alive to the necessity that exists for a new and more suitable building for this branch of their work, to be entirely separated from the outdoor relief department, and they have interviewed successive Governments with a view to their resumption of the present site, so as to enable the Directors to procure another for a new building.

The Benevolent Society has a building fund of £20,000, a sufficient portion of which it is prepared to devote to the building of a new Maternity Hospital. If, therefore, the Government gave the land required, there would be no further demand for building purposes. The Benevolent Asylum has for years received within its walls and rendered assistance to, on an average, about 400 lying-in women annually. Further, it is the only institution in New South Wales which provides a full and sufficient training for our University students and midwives. The Benevolent Asylum has the first claim to recognition, and we think it would be a very ungracious act on the part of the Government of the colony to pass over its claims in favour of those of a dispensary which was founded in the first instance by a self-appointed medical staff. Moreover, such an act could only be construed as an unmerited rebuff to the medical profession in this colony, which has expressed in unqualified terms its disapproval of all dispensaries originating from self-appointed medical officials, and assuming to themselves the functions of public institutions.

It has been objected—the sole ground of objection, apparently—that those who availed themselves of a Maternity Hospital should not be made to feel that they were entering a Benevolent Asylum, and that, therefore, the maternity department of the Benevolent Asylum was not entitled to support. We, however, differ from those who have used this argument. All those who accept gratuitous medical relief are equally the recipients of charity, whether they receive it from the maternity department of the Benevolent Society or from any other hospital. There is abundant evidence that those who leave their homes for maternity purposes feel no reluctance in entering the Benevolent Asylum simply because it is called by this

name. There is no higher or nobler charity in Sydney, and it is no disgrace to any woman to take advantage of its benefits so long as she has not the means to be treated at her own home. Even if there were anything in this objection, another name might be given to this special hospital, just as the eye department in connection with the Sydney Hospital has been given the name of Moorcliff.

We believe that the nucleus of a large and important Maternity Hospital exists at present strongly in the Benevolent Asylum, and we would urge upon the authorities the advisability of providing the necessary land for the purpose of extending that valuable Institution, and so confer a benefit on the colony of New South Wales.

PROPOSED REGISTRATION OF MIDWIVES IN NEW SOUTH WALES.

In our last issue we published the terms of a resolution passed almost unanimously by the N.S.W. Branch of the British Medical Association, after lengthy deliberation. The resolution stated that the Midwifery Nurses Bill, now before the Legislative Assembly, “is likely to increase the dangers arising from the incompetency of midwives, and should, therefore, in the public interest, be strenuously opposed.” As many members of the profession had not an opportunity of listening to the debate, we may summarize the objections put forward by the various speakers. We may divide these objections into two classes, viz., (1) those urged against the principle of the Bill, and (2) those against the Bill itself.

(1) OBJECTIONS TO THE REGISTRATION OF MIDWIVES.

1. There is practically no Medical Act in the colony. Any person may call himself Doctor or M.D., or by any other title implying that he is a duly-qualified medical man, and that he is therefore qualified to practice midwifery. Until such a measure is passed, any qualification of persons to practice a branch of medicine is premature.

2. An inferior order of medical practitioners is created, having a legal standing, and having equal rights in their own particular branch with those who have studied anatomy, physiology, and the allied sciences, without a knowledge of which no person can safely be permitted to attend even a case of true “natural labour.”

3. It is impossible to define the privileges of midwives under an Act of Parliament. If their privileges be curtailed, and they are permitted to attend only in cases of natural labour, then the term "natural labour" must be clearly defined by the Act, as medical authorities do not agree upon a definition. (See *A.M.G.*, October, 1895.)

4. If they are to be permitted to attend all cases of labour, it would be necessary for them to have a fair knowledge of medicine and surgery (including anatomy, physiology, &c.), as the treatment of lying-in women depends to a large extent upon the condition of health of the patient. If allowed to attend all cases they must be permitted to apply instruments, perform craniotomy, and prescribe medicines. They must also be allowed to sign death-certificates.

5. It is better to allow midwives to attend on sufferance, as at present, for they would feel bound to send for a medical man if all is not going well with the patient. If they be registered and entitled to practice equally with medical men, though without the same amount of training, there may be recklessness among them. Midwives must of necessity be drawn from the ranks of the lower classes, who are, as a rule, ignorant on general matters, and therefore cannot be expected to look upon their calling in the same light as medical men.

(2) OBJECTIONS TO THE MIDWIFERY NURSES BILL, 1895.

TITLE.—Vague and ungrammatical. Probably intended to read as follows:—"A Bill to promote the better training of women as midwifery nurses, and to provide for their registration as such."

CLAUSE 2.—Definition of "Midwifery Nurse." A man may be a midwifery nurse, but the Act applies to women only. Sheridan was a midwifery nurse. "Midwife" is a term applicable to women only. Why except men from the provisions of the Act?

"Undertakes to attend." Vague. Does the nurse "undertake," according to the Act, when she engages with the patient, or when the labour commences? There is a very great difference in the meanings of the term in these two instances. "Natural labour." What is natural labour? Dr. Graham (at the B.M.A. meeting, November 1, 1895) said it was absurd to ask for such a definition; that it was as well known as "Leprosy" or "Smallpox," which terms were not defined by the Acts referring to these diseases. Such, however, is not the case. The term "labour" needs no definition, but "natural labour" does, just as *mild* smallpox requires

definition to distinguish it from *malignant* smallpox. There is no sharp line between the two. If a midwifery nurse "undertakes to attend" in cases of "natural labour," is there anything to prevent her from continuing in attendance in case it turns out to be unnatural?

CLAUSE 3.—Why are men excepted? Women may, without acting in opposition to the Bill, call themselves Doctor or Nurse, and may practice midwifery. Lying-in Homes may be established, and be kept by women not registered under this Act. Such cannot be controlled by this Bill.

(Note.—Lying-in Homes are regulated by a Bill entitled "The Children's Protection Act, 1892," which is so full of blunders and absurdities as to be almost inoperative.) (II).—Will a fine of £5 only deter women from risking detection?

CLAUSE 4.—Is "Midwives' Register" the same thing as "Midwifery Nurses Register?" If so, why use the former phrase throughout the Bill, and define the latter only?

A medical certificate of death or of still-birth is not necessary in law. Still-births are not recognised by the Registrar-General at all. Some of the cemetery authorities (e.g., Waverley) require certificates of still-birth before interring dead-born infants, but this Act cannot prevent these authorities from continuing to receive such.

CLAUSE 5.—Define "actual practice." How many cases must have been attended during the year?

1. What is a "certificate in midwifery?" Is it a certificate of having attended a course of instruction, lectures, or practical work?

Why has the Board of Health been charged with the carrying out of this Act? About half the members of the Board are laymen. How can they be expected to draw up rules for the regulation of examinations, &c.? Why is the Medical Board passed over? Has it failed in its duties during the 57 years of its existence? If it is competent to register general practitioners, is it not equally competent to register female specialists?

CLAUSE 6.—The powers given to the Board of Health are too great. Laymen have equal voice with the medical members. There is no provision for any training course for candidates.

CLAUSE 8.—The first day of January is a public holiday, and therefore the register cannot be printed and published on that day, as required.

We shall be very pleased to receive for publication any strong arguments in favour of the Bill or its principle, should any of our readers hold views contrary to ours.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

FOR the guidance of those of our readers who are unacquainted with New Zealand, but who have in contemplation a visit in connection with the approaching Intercolonial Medical Congress in February next, it may be well to make a few remarks on the means of reaching Dunedin, where the Congress will be held, and on the different tours that have been mapped out for visitors to enable them to see as much as possible of the magnificent scenery for which the colony is famed, and to make their holiday as pleasant and economical as is possible.

New Zealand is reached by means of the U.S.S. Co.'s steamers, and tickets for the round trip can be obtained by members of the congress at special rates through the local secretaries in each of the colonies. The "Mararoa" will leave Melbourne on January 8th. The "Talune" on January 15th, calling in at Milford Sound to land those who propose to make the trip overland to Lake Te-Anau, and the "Rotomahana" on the 22nd, reaching Dunedin in time for opening of the Congress. These are all good boats, and the Talune, which will most likely take the greatest number of visitors from Victoria and South Australia, has just had extensive additions made to her already very comfortable accommodation for passengers.

There is a weekly service from Sydney via Auckland, and those members who wish to see the scenery of the North Island will probably sail by the "Manapouri," which leaves Sydney on January 15th. She is a very comfortable boat, and has her saloon accommodation forward.

There is also a weekly service from Sydney to Wellington direct, but it is impossible to give the names of the steamers so far ahead, as one of the boats now keeping the time table will most likely be withdrawn for the annual Sounds excursions in January. The principal places of interest in New Zealand, so far as the visitor is concerned, group themselves naturally into four trips or routes, and it is possible for members of the Congress leaving Australia in the middle of January to travel through any one of the four districts on his way to Dunedin, as is shown in the accompanying itineraries, and arrive in time for the opening of the proceedings. The North Island scenery, with all the volcanic marvels of the Hot Lake district, the Sanatorium at Rotorua, and something of the Maories can be seen by taking the trip from Sydney to Auckland and thence overland by rail and coach to Napier and Wellington.

This trip is possible leaving Sydney on January 15th, but those who can leave a week earlier will find that the time can be easily spent in extra excursions in the Geyser district, or by the athletic in making the trip down the Wanganui River to Wanganui, instead of adhering to the more civilised route to Napier. The trip through the North Island to Napier, being by rail and coach, is easy travelling; the accommodation is good, and ladies will not find any hardships to be faced. Those who branch off from this route at Taupo for the Wanganui River will have to face a couple of days in the saddle, as well as canoeing and camping out. This trip is through some of the finest scenery in the island, but would involve prior arrangements, so as to have canoes and tents to meet the party, and also a fair-sized party to reduce the expense per head. This alteration of the route would also necessitate leaving Sydney on January 8th. The Wanganui River can also be reached by leaving Sydney on the 17th for Wellington, and proceeding thence by rail to Wanganui, and up the river by steamer and

then by canoe. The scenery is very lovely, and the trip affords an opportunity of an insight into Maori life in a region which has not yet been much invaded by European customs. The trip across the West Coast Road of the Middle Island, through the celebrated Buller and Otira Gorges can be managed by leaving Sydney on January 17th for Wellington, arriving in Dunedin in time for the Congress. The trip from Wellington is by steamer to Blenheim, and thence by rail and coach down the West Coast, and across to Christchurch. It presents no difficulties, and the accommodation is fair. The journey to Mount Cook, leaving Sydney on the same date as the last trip, involves two long days coaching from Fairlie Creek to Mount Cook, and the same on the return trip. The accommodation is good, and with good weather the trip is a most enjoyable one. The first day from Fairlie is through uninteresting country, but the scenery at Mount Cook is magnificent, the glaciers are on a gigantic scale, and the views are not surpassed by any alpine scenery in the world.

The fourth district is that of the Cold Lakes of Otago, and access to them is very easy for any travellers. The best known lake is Lake Wakatipu, and the railway runs from Invercargill to the wharf of the lake steamers. The hotel accommodation at Queenstown is excellent, and this trip does not involve any more difficulty than a trip in Switzerland would to an English tourist. There is fair accommodation at the head of the lake, and a very comfortable boarding-house at Diamond Lake, a few miles further up. Those who are fond of Alpine work have here an opportunity of indulging in climbing, and by leaving Melbourne on January 15th it will be possible to make an attempt on Mount Earnslaw, which has some magnificent glaciers, and has been successfully ascended by several parties during the past few years. The scenery and excursions in the valleys are quite enough for the ordinary tourist, and the tour nowhere extends beyond the limits of civilisation.

The trips to Te-Anau and Manapouri involve a little more roughing, as the accommodation is not so good, and large parties cannot be so easily accommodated. The scenery is more like that of the West Coast Sounds owing to the amount of bush, than is the case at Wakatipu, but a forty-mile coach drive precludes heavy luggage and the minor discomforts of travelling, light and sandflies make it less a ladies' trip than that to Wakatipu, though those who undertake it will carry home a recollection of beauty that they will always enjoy.

All the passengers from Melbourne by the "Talune" will have the opportunity of seeing Milford Sound when the party are landed who are crossing the track to Te-Anau, and this party will be picked up at Te-Anau by the party who take the Te-Anau-Manapouri trip from the Bluff.

Those who are photographers will find ample material for their cameras in any of the trips, while those who prefer to devote their time to fishing instead of to scenery will find ample sport and good accommodation on the banks of the Southland rivers.

Unfortunately, there will be no shooting to offer in January, but we understand that the N. Z. golfers are thirsting for a chance of meeting any visitors who are devotees of the ancient game.

Those members who wish to extend their holiday can take the trips in the reverse order after the termination of the Congress, except the Milford-Te-Anau trip, from which they would have to return overland. It would, for instance, be easy after seeing Wakatipu to see Te-Anau and Manapouri on the way back to the

Bluff, or to see Mount Cook or the West Coast road on the way north returning from Wellington to Sydney.

Members leaving Melbourne by the "Rotomahana" on the 22nd will reach Dunedin in time for the Congress, and can take their trips after the business is over.

As it is essential for the comfort of the visitors that early information should be obtained of the number for whom provision has to be made for transport and accommodation, especially on the Milford-Te-Anau track and the Te-Anau and Manapouri routes, and also that suitable hotel accommodation in Dunedin may be secured, members are asked to notify as soon as possible their intention of coming and the route they propose to adopt.

The steamer tickets can be obtained through the local secretaries in each colony, and through tickets for each trip, including coaching, lake steamer fares, and hotels, can be procured at moderate rates from Messrs. Thos. Cook and Sons, in Melbourne, Sydney, Adelaide, Hobart and Brisbane, from whom also can be procured maps and guide-books, and any further information that is desired. As already notified, free passes on the New Zealand railways will be issued to members of the Congress and their wives.

We do not think that those members of the profession who have not yet settled their plans for the summer can do better than put themselves into communication with Messrs. Cook, and study the facilities by which they may visit some of the finest scenery in the world, and make their holiday one to be marked with a white stone in the calendar of their lives.

THE OVERLAND TRIP TO DUNEDIN FROM MILFORD SOUND, VIA SUTHERLAND FALLS AND LAKE TE-ANAU AND MANAPOURI.

Members of the Medical Congress who wish to see the Sutherland Falls and the fine scenery on the route from Milford Sound to Lakes Te-Anau and Manapouri, are notified that arrangements are in progress to permit of them doing so before the commencement of the Congress.

It will be necessary to leave Melbourne by the s.s. "Talune," sailing on Wednesday, January 16th, 1896, which will call at Hobart on Friday, January 17th, and reach Milford Sound on Tuesday, January 21st. This will give eleven clear days in which to reach Dunedin, on Saturday, February 1st, in good time for the opening of the Congress, on Monday, February 3rd, and will at the same time give ample opportunity for thoroughly and leisurely enjoying the various attractions en route.

Ladies, and those who do not care to undertake the more arduous task of walking over from Milford Sound to Lake Te-Anau, can, if they leave by the same steamer as above, after seeing Milford Sound, continue their journey to the Bluff, and travel thence via Invercargill and Lumsden to Lake Te-Anau, and, reaching the head of it by steamer, see the very fine scenery there, meet the overland party and return with them to Dunedin, the combined party visiting Lake Manapouri, which is well worth seeing, on the way.

Or members can, instead of diverging at Lumsden to visit Te-Anau, continue their journey to Lakes Wakatipu and Wanaka, and finally reach Dunedin by coach through the interior of Otago. The character of the Milford-Te-Anau overland trip can be very accurately ascertained by reference to the publication of "Fiordland," recently issued in Melbourne. The track itself, for the most part, is a very good one, and any ordinary pedestrian should be able to accomplish the journey, the most part of the route being the surmounting of the saddle, which, however, presents no real difficulties.

Those intending to traverse this route should note the following details. Reliable boots are a *sine qua non*; they should be stout and well made, not too old, but should have been worn at least one month previously, so as to fit the feet well. As provisions, hardware, and accommodation will be provided on the track, it will be necessary only to carry a change of clothing and blankets. A flannel shirt and tweed suit should be sufficient to walk in. Each traveller should in addition bring one double blanket, a small towel, a complete change of warm underclothing, a waterproof sheet, 6 x 4, to wrap round everything, and straps, both for binding up the swag and for carrying the same.

The climate of the West Coast ranges is very variable, the rainfall frequent, and very heavy, hence the waterproof sheet is absolutely necessary in order to keep blankets and underclothing dry. Waterproofs and greatcoats are apt to prove useless burdens, and had better not be taken. Endeavour should be made to keep the swag as light and as easy to carry as possible.

The provisions supplied on the track will consist of plain, imperishable food, such as tinned meats, biscuits, etc., and, as nothing can be bought on the way, any special creature comforts (such as whiskey) must be brought by each individual for himself.

Huts and tents will be provided for accommodation, and arrangements will be made for the housing of up to twenty men.

Ladies are not recommended to make this trip, and no steps can be taken for arranging special accommodation for them.

Guides will meet the steamer at Milford Sound, and accompany the party overland, and it is also the intention of Dr. Roberts, of Dunedin, who is well acquainted with this region, to be at Milford Sound, if possible, in order to return with the party.

As it will much facilitate the organisation of this trip to know approximately at an early date the number likely to take it, members of the Congress intending to do so are requested to forward their names to Prof. J. H. Scott, University, Dunedin, as early as possible.

SPECIMEN TOURS THROUGH NEW ZEALAND FOR THE GUIDANCE OF VISITORS TO THE MEDICAL CONGRESS, TO BE HELD IN DUNEDIN, FEBRUARY 3RD, 1896.

NOTE.—Fares quoted with the accompanying itineraries do not include Union S.S. Co.'s fares, which are paid through the Congress officers; or railway fares, which are covered by the Government pass to visiting members, but do include hotel accommodation, coach and lake steamer charges.

THOMAS COOK AND SON,
95 Princes-street, Dunedin.

E. & O. E.

TOUR 1.

JANUARY.

15th, Wed.—Leave Melbourne per s.s. "Talune."

17th, Fri.—Hobart.

21st, Tues.—Arrive Milford Sound.

22nd, Wed. }

23rd, Thurs. } Overland track to Head of Lake Te-Anau.

24th, Fri. }

25th, Sat.—Steamer to foot of Lake.

26th, Sun.—Steamer trip to Middle Arm (Te-Anau) and return.

27th, Mon.—Coach to Manapouri.

28th, Tues. } Steamer to Head of Lake Manapouri and

29th, Wed. } Arms and return.

30th, Thurs.—7 a.m. coach to Lumsden; due 3 p.m.

31st, Fri.—10.55 a.m. train to Dunedin, due 7 p.m.

Fare, £11 5s.

TOUR 2.

JANUARY.

15th, Wed.—Leave Melbourne per s.s. "Talune."
 17th, Fri.—Hobart.
 22nd, Wed.—Arrive Bluff and Invercargill.
 23rd, Thurs.—7.15 a.m. train for Lumsden, 11 a.m. coach to Te-Anau; due 7 p.m.
 24th, Fri. } Steamer to Head of Lake and return.
 25th, Sat. }
 26th to 31st.—As per Tour 1.

Fare, £14.

The above fare is for a party of four or more, each. The following extra charges must be paid if less travel:—

1 Person ...	...	...	20s.
2 Persons ...	...	...	10s.
3 Persons ...	...	...	5s.

TOUR 3.

JANUARY.

15th, Wed.—Leave Melbourne per s.s. "Talune."
 17th, Fri.—Hobart.
 22nd, Wed.—Arrive Bluff and Invercargill.
 23rd, Thurs.—7.15 a.m. train to Kingston, steamer to Queenstown.
 24th, Fri.—At Queenstown, coach to Maori Point and return.
 25th, Sat.—Steamer to Head of Lake; due 1.15 p.m.
 26th, Sun.—Head of Lake to Paradise (Diamond Lake), coach.
 27th, Mon. }
 28th, Tues. } At Paradise (Diamond Lake).
 29th, Wed. }
 30th, Thurs.—Paradise to Head of Lake, 3 p.m. steamer to Queenstown.
 31st, Fri.—At Queenstown, coach to Kawarau Falls, Lake Hayes, Arrowtown, &c., and return.

FEBRUARY.

1st, Sat.—6.15 a.m., steamer to Kingston, and train to Dunedin; due 7 p.m.

Fare, £7 15s. 0d.

TOURS 2 AND 3 COMBINED.

JANUARY.

8th, Wed.—Leave Melbourne per s.s. "Mararoa."
 10th, Fri.—Hobart.
 13th, Mon.—Arrive Bluff and Invercargill.
 14th, Tues.—7.15 a.m. train to Lumsden, 11 a.m. coach to Te-Anau.
 15th, Wed.—At Te-Anau.
 16th, Thurs.—Steamer to Head of Lake.
 17th, Fri.—Return.
 18th, Sat.—Steamer to Middle Arm, and return.
 19th, Sun.—Coach to Manapouri.
 20th, Mon. } Steamer to Head of Lake and Arms,
 21st, Tues. } and return.
 22nd, Wed.—7 a.m. coach to Lumsden; due 3 p.m.
 23rd, Thurs.—10.45 train to Kingston, and steamer to Queenstown.
 24th to Feb. 1st.—As per tour 3.

Fare, £18 15s. 0d.

The above fare is for a party of five or more each. The addition for a party of four is 5s., of three 10s., of two 20s., of one 40s. each.

TOUR 4.

JANUARY.

15th, Wed.—Leave Sydney per s.s. "Manapouri."
 20th, Mon.—Arrive Auckland.
 21st, Tues.—At Auckland.
 22nd, Wed.—9.35 a.m. train to Rotorua; due 7.15 p.m.
 23rd, Thurs.—At Rotorua. Excursion to Waitapu.
 24th, Fri. } Valley, Mokoia Island, and Tikitere.
 25th, Sat.—7 a.m. coach to Wairakei; due 4 p.m.

26th, Sun.—Visiting sights at Wairakei. Afternoon coach to Taupo.

27th, Mon.—Taupo 7.30 a.m. coach for Tarawera; due 5 p.m.

28th, Tues.—6.30 a.m. coach for Napier; due 5 p.m.

29th, Wed.—10.15 a.m. train for Wellington; due 9.30 p.m.

30th, Thurs.—At Wellington.

31st, Fri.—Wellington to Lyttelton; rail to Christchurch.

FEBRUARY.

1st, Sat.—11 a.m. train to Dunedin; due 9 p.m.

Fare, £12 5s.

JANUARY.

TOUR 5.

17th, Fri.—Leave Sydney per s.s. "Te-Anau" (?)

22nd, Wed.—Arrive Wellington.

23rd, Thurs.—At Wellington.

24th, Fri.—Steamer to Picton and coach to Blenheim.

25th, Sat.—7 a.m. coach to Nelson; due 7 p.m.

26th, Sun. } At Nelson.

27th, Mon. }

28th, Tues.—9.30 a.m. train to Belgrove, 12m. coach to Longford.

29th, Wed.—6 a.m. coach to Reefton; due 5.30 p.m.

30th, Thurs.—8 a.m. train to Greymouth; due 11 a.m.

31st, Fri.—9.45 train for Jackson, coach to Bealey, through Otira Gorge.

FEBRUARY.

1st, Sat.—6.30 a.m. coach to Springfield, 3.45 p.m. train to Christchurch. Night steamer to Dunedin, due next morning; or 11 a.m. train on February 3rd, due Dunedin 9 p.m.

Fare, £13 5s.

TOUR 6.

JANUARY.

17th, Fri.—Leave Sydney per s.s. "Te-Anau" (?)

22nd, Wed.—Arrive Wellington.

23rd, Thurs.—Arrive Christchurch: 11 a.m. train to Fairlie.

24th, Fri.—8 a.m. coach to Pukaki; due 6 p.m.

25th, Sat.—8 a.m. coach to Mount Cook; due 6 p.m.

26th, Sun. } At Mount Cook.

27th, Mon. }

28th, Tues.—8 a.m. coach to Pukaki; due 6 p.m.

29th, Wed.—8 a.m. coach to Fairlie; due 6 p.m.

30th, Thurs.—8 a.m. train to Dunedin; due 9 p.m.

Fare, £9.

Two days longer may be spent at Mount Cook, returning to Dunedin on February 1st, at the following additional cost for special coaches:—

1 Person ...	...	£7 4
2 Persons ...	...	£3 4 each.
3 or more Persons ...	...	£1 4 each.

THE EDITOR'S LIBRARY.

THE editor of the *Australasian Medical Gazette* invited the Presidents, members of Council, and officials of the New South Wales Branch of the British Medical Association, the Suburban Medical Societies, and the Newcastle Medical Society to be present at the dedication of his library to the use of the medical profession, on the 29th November, 1895.

The library is located on the first floor of the building of Sydney Permanent Freehold Land and Building Society, situated at the corner of Pitt and Bathurst streets, Sydney. The entrance is at the Permanent Chambers, 121 Bathurst street.

The library has been opened for the use of members of the medical profession, and at present will be available from 2 to 5 p.m. every week day.

LETTERS TO THE EDITOR.

LEPROSY IN QUEENSLAND.

(To the Editor of the Australasian Medical Gazette.)

SIR,—The discussion on Dr. Lyons' motion at the August meeting of the Association, Brisbane, was to me of much interest in both its medical and ethical aspect, and I think a short history of the case of the unfortunate leper, J. Wild, now isolated in accordance with the Act, may give point to some of the observations made during that discussion.

John Wild, aged about 34, admitted to Hospital (Herberton) June 18th, 1889. Occupation, stream tinger; been working at a lonely camp about 40 miles from Herberton; suffering from an ulcer over and communicating with second metatarsal phalangeal joint of left foot; much emaciation and debility; pain and redness with swelling over joint, stated to have commenced six weeks previously, ascribed to working in water, circumstances of life and surroundings; very depressing diagnosis; perforating ulcer of foot. Rapidly improved under tonic and hygienic treatment. Six (6) weeks after admission ulcer quite healed, no exfoliation of bone, but shortening and deformity of toe. Quite strong, and after a short, further spell he returned to camp and work.

Some 18 months after he was reported, anonymously by letter, as being the subject of leprosy, and I was directed to report on the case, and visited his camp for that purpose.

He was then stout and healthy in appearance, and informed me that he was able to do a good day's work. Left foot swollen; old ulcer open and running, and extending to joint of third toe, which was also shortened and distorted. Said it caused him no pain or inconvenience. Veins over dorsum of each foot, and lower part of each leg, very manifest and swollen. Anæsthesia over dorsum of each foot and anterior aspect forearms, more marked on ulnar side. No change in external ears; facial expression unchanged. Pressed him to come into hospital, but he refused, for fear of losing his tin. With considerable misgivings I reported it to be a case of perforating ulcer of the foot.

On October 18th, 1892, he was again admitted to hospital, and to my mind presented undoubted clinical features of leprosy, which I need not detail. He was then reported to the Colonial Secretary, but in my report I suggested that, as his camp was isolated, he should be permitted to return to it, and that I should report again in six months time. The reply to which was that the "Lucinda" was passing down the coast, and that, as the voyage would do him good, he had better join it. (A very sensible view.)

On arriving in Brisbane much dispute arose as to nature of the case. No specific bacillus could be caught, and it was therefore pronounced "not to be leprosy," and was treated in the general hospital, in due course discharged, paragraphs in papers stating he was much improved. On his arrival in Herberton, however, there was neither improvement in the local lesions, nor his general appearance noticeable. Since which time I have not seen him, having left the district. But on the 18th July, 1895, he was again admitted to the Herberton Hospital, transmitted thence to Brisbane, the bacillus captured, and he is now acknowledged to be a leper.

As to the medical aspects of the case, I originally diagnosed perforating ulcer of the foot, which disease was then to me, and (since Wild has proved to be a leper) still is, a purely academic disease, as I have never seen a case. But I ask, Were not the clinical

features of the case, when first seen by me in 1889, in full accord with the text-books description of that disease—say, in "Heath's Surgical Dictionary?" And, further, what is perforating ulcer of the foot, and is there a specific bacillus associated with it? I omitted to state that I had eliminated the probability of a syphilitic origin. However, in 1892, when sent to Brisbane on my report, to my mind all the symptoms of anæsthetic leprosy were present. But that microbe, the bacillus lepræ, eluded the needle and scoop, with a consequence that much obloquy was cast upon me, who had reported the case.

From the circumstances of my experience, the remarks of Dr. Hirschfield concerning the leprosy bacillus were of very peculiar interest.

Now, as to an ethical aspect, also referred to in the discussion. By law, these cases have to be reported, on reasonable suspicion only. The existence or suspicion of a leper in a family must be a cause of much pain and social inconvenience. The word "leper" is still a term of opprobrium among the ignorant, and therefore the strictest secrecy should be observed in reporting these cases, among the white population, at all events. Judge, then, my disgust when I reported Wild to find his name appearing in the papers as a leper the same evening in Brisbane, and on the morrow in the telegraphic news of every paper through the country.

Should I have to report suspected leprosy again I shall only do so by letter, and after having obtained an assurance of secrecy.—I am, sir, faithfully yours,

W. D. BOWKETT.

Surgeon to Winton Hospital,
Winton, Queensland, November 4th, 1895.

IDIOPATHIC UMBILICAL HÆMORRHAGE (?).

(To the Editor of the Australasian Medical Gazette.)

SIR,—The following case appears to be an instance of the above rare condition. On November 22nd I was called in to see an infant which was "bleeding from the navel." The child was a male, full-time, and previously healthy, and parturition appeared to have been normal. (I was not in attendance.) The cord had separated on the fifth day, and there had been no inflammation, offensive smell, or hæmorrhage before or after the time of separation. The only peculiarity that had been noticed was that, with the exception of the first motion, and two on the third day, the stools had been "quite white, like milk, without a trace of yellow." No yellow tinge had been observed in the skin. On the morning of the ninth day (the day I was called in), on undressing the child for its morning bath, the binder was found saturated with blood, which was still coming from the navel. When I saw the child there was a slight icteric tinge over the skin. There was no coma, convulsions, vomiting, nor any intestinal disturbance, nor any appearance of œdema or purpura. The umbilicus appeared healthy, as did also the surrounding abdominal wall. Blood was oozing from the navel in some quantity. Pinching up the abdomen just below the umbilicus stopped the flow for a short time, but I afterwards noticed that the bleeding was intermittent. I tried pressure by pads, but ineffectually, and finally underpinned the umbilicus with two hare-lip pins and a silk ligature. This appeared to lessen, but did not altogether check, the hæmorrhage, which still maintained its intermittent character. The icteric tinge became more marked towards evening. The child died about 9 p.m. on the same day, death not being preceded by coma or convulsions.

Ashby and Wright, in their work on the Diseases of Children, allude to idiopathic or spontaneous umbilical hæmorrhage as a very rare condition. It usually occurs about the fifth day, but may come on in the third week. The mortality is put down as 83 per cent.

P. L. TOWNLEY, B.A., M.B., Ch.M.
Esk (Queensland), Nov. 24th, 1895.

WILHELM MEYER TESTIMONIAL.

(To the Editor of the Australasian Medical Gazette.)

SIR,—Herewith I enclose copy of a letter which appeared in *The Times* of July 31st, 1895, which explains so well the matter which I wish to bring before the medical profession in Australia that I ask you to favour me by inserting it in the *Australasian Medical Gazette*. When I was in London, during the last annual meeting of the B. M. A., I was asked by Dr. Felix Semon, chairman of the committee, to further the movement in Australia, and I shall be happy to receive subscriptions from those who are willing to help. The discovery made by Dr. Meyer has not only been a great boon to suffering humanity, but has opened up a new field of practice, for which we, as medical men, have cause to be grateful. The signatures to the letter in *The Times* show that the leaders in the profession in England have warmly taken up the movement.

Yours truly, A. J. BRADY.
Sydney, November 6th, 1895.

(FROM "THE TIMES," JULY 31, 1895).

WILHELM MEYER MEMORIAL.

(To the Editor of The Times).

SIR,—With your permission we wish to enlist the interest of your readers in a movement of a somewhat unusual character. Twenty-seven years ago Dr. Hans Wilhelm Meyer, of Copenhagen, recognised that an enlargement of the glands situated between the nose and the throat, to which he gave the name of "adenoid vegetations," was the most fertile cause of deafness and imperfect nasal respiration in children. This discovery represents one of the most important practical advances of modern medicine.

Already many thousand persons, through the timely removal of the enlarged glands, have been saved from lifelong deafness or from the lasting consequences of obstructed respiration; and it may be safely said that to no one of our contemporaries are we more deeply indebted for the development of a healthy mind in a healthy body of the rising generation than to Hans Wilhelm Meyer. On the recent death of this eminent man it was felt that his unusual merits deserved unusual recognition, and the proposal to erect a statue to him at Copenhagen has met with a most sympathetic reception, not only by his fellow-countrymen, but also by the medical profession of other countries.

Her Royal Highness the Princess of Wales has most graciously consented to give her patronage to the scheme, and has expressed her sincere gratification at the idea that so eminent a fellow-countryman of her Royal Highness should be thus honoured.

The Municipality of Copenhagen have promised to grant a suitable site for the statue, and at this moment, in almost every country, committees are being formed for the furtherance of this object.

Whilst, as a rule, the medical profession, when they wish to honour their great living or dead, confine their appeals to the ranks of the profession itself, in the present instance it is thought that an opportunity should be given to the numberless parents of children whose sound development and the preservation of whose hearing has been rendered possible by Dr. Meyer's discovery to show their gratitude by contributing towards a memorial in appreciation of his great services.

We, therefore, through the medium of your columns, venture to invite subscriptions, which may be sent to our Honorary Treasurer, A. E. Cumberbatch, Esq., F.R.C.S., 80 Portland-place, London, W., and will be duly acknowledged in the journals.

FELIX SEMON, M.D., Chairman of the Committee.
J. RUSSELL REYNOLDS, M.D., F.R.S., President of the Royal College of Physicians.

CHRISTOPHER HEATH, F.R.C.S., President of the Royal College of Surgeons.

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WATSON WILLIAMS, M.D.

E. CRESWELL BABER, M.B.,

97 Western-road, Brighton.

C. A. BALLANCE, F.R.C.S.,

106 Harley-street, W.

Hon.
Secretaries.

BACTERIOLOGY.

(To the Editor of the Australasian Medical Gazette.)

SIR,—In the April number of the *Gazette* we were informed that a post-graduate course in Bacteriology had been established in Melbourne. This, I at once thought, was a step in the right direction, and fully expected that it would only be a month or two until we heard of something similar being done in Sydney. Yet more than six months have already elapsed, and up to the present no move seems to have been made to follow the laudable example of our Melbourne confrères.

Now, Sir, with your permission, I desire to ask through the columns of the *Gazette* if one of the members of our profession can advance one valid reason why we should not have a post-graduate course in Bacteriology established in Sydney without any unnecessary delay? Personally, I cannot see any reason why there should be any difficulty about it. We have in our midst several most capable bacteriologists, and some of them, I believe, have had experience in the teaching of it. We also have amongst us several men who would, I have no doubt, be anxious to avail themselves of a post-graduate course in this study.

I feel that this is a matter that requires no argument to commend it to a large majority of the practitioners, and I hope that it is merely necessary to thus draw attention to what I can only imagine has been an oversight.—I am, yours, &c.,

UNIT.

Sydney, November 4th, 1895.

REVIEWS.

THE CARE OF THE BABY: A Manual for Mothers and Nurses, containing practical directions for the management of infancy and childhood in health and disease. By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, Professor of Clinical Medicine in the Philadelphia Polytechnic and School for Graduates in Medicine, &c., &c. Philadelphia: W. B. Saunders, 1895. Sydney: L. Bruck. Price, 6s.; by post, 6s. 6d.

THIS is a good, reliable book, which gives wholesome practical advice to mothers and nurses. Medical men in large practice cannot expect their patients to be continually consulting them on matters which every mother should know, and therefore much good may be done by their advising parents to buy and study carefully such a work as that under review. Various chapters deal with the preparation for the advent of the baby, its growth, toilet, clothing, diet, &c. They are well written, and deal with subjects of the utmost importance to the infant population. The number of deaths under one year of age to 100 births in the Australian colonies is, according to Hayter:—Victoria, 12·68; Queensland, 12·64; West Australia, 12·26; South Australia, 12·01; New South Wales, 11·90; Tasmania, 10·56; New Zealand, 8·74. Most of these deaths are undoubtedly due to ignorance on the part of parents of the wants of the infant, and this defect may be, to a certain extent, remedied by the study of such a book as Dr. Griffith has published. The language is simple and free from technicalities. The chapter at the end of the book dealing with the sick baby might be judiciously cut down, and many of the paragraphs excised—*e.g.*, where is the necessity for detailing the symptoms of diphtheria or small-pox after the disease has become established?

TYPHOID FEVER IN SYDNEY AND SUBURBS.

This report, from the Board of Health, deals with typhoid fever in the metropolitan district of Sydney from 1876 to 1894, and also gives some particulars respecting measles, scarlet fever, and diphtheria. The information with regard to typhoid fever shows that from 1876 to 1885 the mortality increased from 46·07 to 102·17 per 100,000 of population, while from 1886 to 1893 it decreased from 90·90 to 18·01 per 100,000. During 1894 the rate increased to 29·12. A number of tables in the appendix are interesting and instructive.

DAIRIES SUPERVISION ACT.—(Report on administration of, for the year 1894.)

The good effects of the Dairies Supervision Act have been abundantly evident for some years in the decreasing mortality from communicable diseases. It is gratifying to find that most of the dairies throughout the colony of New South Wales are now in a satisfactory sanitary condition. No doubt there are anomalies in the Act, for the report states, "Much dissatisfaction exists in some districts owing to, say, a farmer selling milk as such being subjected to the provisions of the Act, whereas his neighbour, who makes butter, does not come under any supervision." These, however, will be remedied later on.

A NEW AFRICAN MEDICINE—THE COMBRETUM RAIMBAULTII, FOR THE BILIOUS HÆMATURIC FEVER OF HOT COUNTRIES. By Dr. Morgan Finucane (late of West Africa), of Taviuni, Fiji. Published at Suva, Fiji.

WE have received from the author a pamphlet under the above title, which introduces to our notice a plant known amongst the West African natives as "Kinkelibah," the properties of which have been ascertained by Professor Ed. Heckel. He called the plant after a missionary named Raimbault, who sent it to him from the West Coast. Its principal ingredients are (1) a considerable amount of tannin, (2) nitrate of potash. Its properties are tonic, diuretic, at first emetic, and subsequently it stops the return of vomiting, and it sometimes brings on bilious diarrhoea. Finucane has seen good effects from its use in bilious hæmaturic fever (the deadly "black water fever") in the form of decoction, and says that its use enhances the action of the only drug that is of the smallest service in the treatment of this fever, and that is quinine.

EARLY SCOLIOSIS, OR CURABLE CURVATURES OF THE SPINE. By Percy G. Lewis, M.D., M.R.C.S., &c. London: John Bale and Sons, 1895. Price, 2s. 6d.

THIS little work is an essay on curvature of the spine, its etiology, pathology, diagnosis and treatment. The best chapters are those devoted to an explanation of the various gymnastic and other exercises used in the treatment of the affection. The book, which is well illustrated, will repay perusal.

THE DROITWICH BRINE BATHS AS THERAPEUTIC AGENTS IN VARIOUS DISEASES: By W. H. Tomlins, L.R.C.P., M.R.C.S. London: H. K. Lewis, 136 Gower-street, 1895.

IN this interesting pamphlet Dr. Tomlins points out the improvements that have been effected at Droitwich (Eng.), and the value of its waters therapeutically and analytically considered. Although the value of these Droitwich springs was known many years ago, there was nothing attractive about the town as it then existed. All this has been altered, and Droitwich is now a new town, owing chiefly to the wisdom and liberality of a private citizen. We are pleased to see a *brochure* of this character published, dealing with interesting information for the public and practitioners in a manner that is at once practical, and withal scientific.

THE DYNAMICS OF LIFE: An address by W. R. Gowers, M.D., F.R.S. London: J. and A. Churchill, 11 New Burlington-street.

THIS is a notable address by the renowned investigator and specialist in diseases of the spinal cord and cerebrum, Dr. Gowers, and is couched in his usual felicitous language. To those of our readers who dive deep into philosophical research, and are engaged in the study of the laws governing life on this mortal coil of ours, Dr. Gowers' address will possess great attraction, and we heartily recommend it to their consideration.

REVIEW.

THE MAN FROM THE SNOWY RIVER, AND OTHER VERSES. BY A. B. PATERSON. Sydney: Angus and Robertson. London: Young J. Pentland. Price, 6s. ; by post, 6s. 4d.

Medical men occasionally require recreation, and we have much pleasure in recommending this volume of smart, crisp, humorous and pathetic poetry to our readers. These verses are redolent with the perfume of Australian life, and possess the true ring of lofty inspiration and genius.

THE MONTH.

NEW SOUTH WALES.

THE proportion of births registered in Sydney and suburbs during October to every 1,000 of the population was 2·58, and of deaths 1·00; 106 deaths, or 25 per cent. of the total deaths, occurred in public institutions. The deaths of children under five years of age during the month were 130, or 30·59 per cent. of the total, 89 being under the age of one year. Ten deaths of child-bearing women took place during the month, or one death of a woman to every 109 births recorded.

At the last monthly meeting of the Board of Directors of the Sydney Hospital Dr. A. Murray Will was elected Honorary Assistant Physician, Dr. H. L. Maitland Honorary Assistant Surgeon, and Mr. Philip B. Reading Honorary Assistant Operating Dentist. At the same meeting a letter was read from Dr. G. Armstrong, stating that he did not intend to offer himself for re-election as Medical Superintendent. It was resolved that the resignation be accepted with very great regret, and that the same be placed on record in the minutes; also that a letter acknowledging the services rendered by Dr. Armstrong be forwarded to him on behalf of the board.

WE regret to have to record the death of Benjamin Armitage Newell, M.B., Ch.M. Syd. 1892, Government medical officer and medical officer to the Walgett Hospital, who died on November 7, after a brief illness. An operation being necessary, he was being conveyed to Sydney, but became so ill on the journey that he was compelled to stop about 15 miles out of town. Dr. Henry, of Narrabri, was sent for, but owing to the heavy roads from the recent rains he could not arrive under 20 hours. The operation was successfully performed, but the patient died two hours afterwards. Dr. Newell was a promising young physician, and was held in the highest estimation. At one time he held the position of resident medical officer at the Sydney Hospital.

ZACHARY PEARCE POCOCK, I.S.A. Lond. 1840. M.R.C.S. Eng. 1843, a colonist of 45 years' standing, formerly a clergyman in Tasmania, died at his residence in Lorne-street, Summer Hill, near Sydney, on the 22nd November, aged 79 years.

DR. CHRISTIAN FREDERICK RIEDEWALDT, who practised formerly at College-street, Sydney, for many years, died on the 22nd October, at Fredensborg, Denmark, at the age of 76 years.

DR. A. N. CHENHALL, a Melbourne graduate, has commenced practice at Corowa.

DR. HUGH KIRKLAND, of Bathurst, has been appointed hon. surgeon-lieutenant in the Medical Staff Corps N. S. Wales Volunteer Forces.

DR. F. S. KIRKLAND, of Croydon, near Sydney, has gone to Europe on a twelve months' holiday. During his absence his practice will be carried on by Dr. Weekes.

DR. J. F. LOVEGROVE, formerly of Timaru (N.Z.), has succeeded to Dr. Mill's practice at Picton.

DR. R. D. MACGREGOR has commenced practice at Lucknow, near Orange.

DR. A. E. MILLS, late of Picton, will shortly start practice at Strathfield, a fashionable suburb of Sydney. Dr. Mills, on leaving Picton, was presented by the residents with an illuminated address, a secretaire, and a tea and coffee service.

DR. W. MORRIS, of Bligh-street, Sydney, left for the old country by the North German Lloyd steamer "Bayern."

DR. CHANNING NEILL, late of Miami, has commenced practice at Burrowa.

NEW ZEALAND.

THE proportion of deaths registered during October to every 1,000 of the population was 1·19 for Auckland and suburbs, 1·19 for Wellington with suburbs, 0·85 for Christchurch and suburbs, and 0·53 for Dunedin and suburbs. The total births in these four boroughs during October amounted to 391, against 379 in September. The deaths in October were 159, to which males contributed 83 and females 76. Forty-two of the deaths were of children under 5 years of age, being 26·42 per cent. of the whole number; 35 of these were under 1 year of age.

DR. J. F. CAROLAN has removed from Papakura to Kawakawa, Bay of Islands.

DR. G. W. COLE has removed from Huntly to Gisborne.

DR. J. H. FORTE has removed from Tauranga to Parnell, a suburb of Auckland.

DR. J. C. HOOD, late of Sorell (Tas.), is now residing at Auckland.

QUEENSLAND.

DR. C. A. E. SHEAF, formerly of Toowoomba, has set up in practice at Wickham Terrace, Brisbane.

SOUTH AUSTRALIA.

THE Adelaide Hospital Board has received a communication from the Government to the effect that the Cabinet had decided to increase the salary of the Resident Medical Superintendent to £500 per annum, with the stipulation that a South Australian resident should be appointed.

DR. A. A. LENDON, of Adelaide, has been made President of the Section of Medicine at the next Intercolonial Congress, to be held at Dunedin in February next.

DR. A. A. LENDON, of Adelaide, has resigned his commission in the S. A. military forces.

VICTORIA.

THE proportion of births registered in Melbourne and suburbs during October to every 1,000 of the population was equivalent to 28·35, and of deaths 15·34 p.m. Males contributed 50 per cent. and females 50 per cent. to the mortality of the month. Children under five years of age contributed 21 per cent. to that

mortality, as against 24 per cent. in October, 1894. One hundred and forty-four deaths, or 25 per cent. of the whole, took place in public institutions.

FREDERICK THOMAS WEST FORD, M.R.C.S. Eng. 1848, who formerly practised for many years in Collins-street, Melbourne, where he held the positions of Surgeon to the Police Hospital and Public Vaccinator, and also Hon. Consulting Surgeon to the Protestant Orphan Asylum, died at Cheltenham (England) on the 5th November, in his 74th year.

THREE young ladies, graduates of the Melbourne University, were registered by the Medical Board on November 15th.

DR. ALFRED COWEN has succeeded to the practice of **DR. J. M. Scott** at Steiglitz.

DR. E. H. EMBLEY has been re-appointed anæsthetist to the Melbourne Hospital for two years.

D. W. P. NORRIS, late of Lilydale, has succeeded to the practice of **DR. B. B. Hoggan**, at Romsey.

DR. F. PEIPERS has returned to Melbourne from Cue, the centre of the Murchison goldfields in Western Australia.

DR. R. C. SANDERS, a recent arrival, has settled at Milawa, 155 miles N.E. of Melbourne.

WESTERN AUSTRALIA.

THERE were registered in the colony during the quarter ending 30th September last, 681 births (351 males and 327 females), or 0.72 per cent. to the population; the number of deaths registered was 332 (242 males and 90 females), or 0.35 per cent. to the population. The total deaths under one year of age was 73, being 10.72 per cent to total births, and 21.99 per cent. to total deaths. The total population on September 30th was 94,373, viz., 60,406 males and 29,967 females.

We learn that **Arthur Reginald Chater**, L.R.C.P. Lond., M.R.C.S. Eng., 1891, died in April last, from typhoid fever, at Kalgoorlie, within a couple of days of his arrival on that goldfield.

DR. G. W. BARBER has settled at Kalgoorlie.

DR. ERNEST BLACK has been appointed Resident Magistrate of the District of Esperance, Magistrate of the Local Court, Sub-Collector of Internal Revenue and Customs, and Quarantine Officer at Esperance, Resident Medical Officer of Esperance District, and Public Vaccinator of the Urban, Suburban, and Rural Districts of Esperance.

DR. F. M. HOUSE has been appointed Resident Magistrate of the West Kimberley District, Chairman of the Court of General Sessions, Magistrate of the Local Court, Quarantine Officer, and Sub-Collector of Customs and Internal Revenue at Derby; also Resident Medical Officer of the West Kimberley District, Public Vaccinator for the Urban and Suburban Districts of Derby and the Rural District of West Kimberley.

DR. D. E. WILLIAMS has been appointed Resident Medical Officer of the Wellington District, Public Vaccinator for the Urban and Suburban Districts of Bunbury and the Rural District of Wellington, and Quarantine Officer at Bunbury.

DR. FRANCIS G. WRIGHT has been appointed Resident Medical Officer of the Gascoyne District, Public Vaccinator for the Urban and Suburban Districts of Carnarvon and the Rural District of Gascoyne, and Quarantine Officer at Carnarvon.

MEDICAL APPOINTMENTS.

Barber, George Walter, M.R.C.S. Eng., L.R.C.P. Lond., to be Health Officer at Kalgoorlie, W.A.
Carolan, James Frederick, M.R.C.S.E., to be Public Vaccinator for districts of Kawakawa and Bay of Islands, N.Z.
Cowen, Alfred, M.B., to be Public Vaccinator at Steiglitz, Vic.
Reid, George Marr, M.B., to be Health Officer for Shire of Heytesbury, Vic.
Sanders, Robert Coles, L.R.C.S. Irel., to be Public Vaccinator at Milawa, Vic.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

ARGYLE.—On the 2nd November, at Kew, the wife of Stanley Argyle, M.B., M.R.C.S., of a daughter.
BOTT.—On the 19th November, at Balmain, near Sydney, the wife of Joseph Bott, of a daughter.
LUKER.—On the 20th October, the wife of Dr. Luker, Brewarrina, of a son.
MILLER.—On the 1st November, at Maryborough, Vic., the wife of Dr. W. F. Miller, of a son.
WIGG.—At Craigholm, Unley Road, Adelaide, on November 5th, the wife of H. Higham Wigg, M.D., of a son.

MARRIAGES.

BLAXLAND—MARTIN.—On the 23rd October, at St. John's Church, Camberwell, Vic., Ernest Gregory Blaxland, L.R.C.P. Lond., M.R.C.S.E., of Burwood (Sydney), to Matilda Campbell, youngest daughter of John Martin, of Camberwell.
MORRISON—CRAIGH.—On 19th November, at Crieff, Scotland, by the Rev. Dr. Henderson, W. Morrison, M.A., M.D., Ballarat (Vic.), to Margaret, elder daughter of the late James Craigh, of Craighdarroch, Ayrshire, Scotland.

LETTS' MEDICAL DIARIES for 1896, in leather cover, with tuck, 4s.; the same, interleaved, 5s. 6d. L. Bruck, 13 Castlereagh-street, Sydney.

MESSRS. Burroughs, Wellcome and Co. inform us that at the Amsterdam Exhibition they have been awarded a highest award, the Grand Medal of Honour, in recognition of the perfection of the following chemical and pharmaceutical products:—Kepler Extract of Malt and Kepler Solution of Cod Liver Oil in Malt Extract; Hazeline and Hazeline Cream; "Tabloids" of Compressed Drugs and Chemicals, including Hypodermic "Tabloids"; and "Soloids" of Compressed Antiseptics. This makes the 115th Highest Award this progressive firm has obtained since 1884. Messrs. B. W. & Co. have also been awarded a diploma for Gold Medal for their pharmaceutical preparations at the Carlisle Trades Industrial and Art Exhibition.

FOR SALE.—An *Archer Operating Chair*, in good condition, cheap. Apply to Mr. Bruck, 13 Castlereagh street, Sydney.

ADELAIDE.—*Medical Man* with large house in beautiful grounds, on tram line, 15 minutes from G.P.O., Adelaide, has vacancy for resident patient; terms reasonable. Apply to Mr. Bruck, 13 Castlereagh-street, Sydney.

FOR SALE.—A *Very Complete Bacteriological Outfit*, arranged and made by one of the leading firms of Berlin in this specialty; quite new. Apply to Dr. O. Bloch, Albury, N.S.W.

REPORTED MORTALITY FOR THE MONTH OF OCTOBER, 1895.

Cities and Districts.	Population.	Births Registered.	Deaths Registered.	Deaths under Five Years.	Number of Deaths from												
					Measles.	Scarlet Fever.	Croup and Diphtheria.	Influenza.	Typhoid Fever.	Dysentery and Diarrhoea.	Phthisis.	Bronchitis and Pneumonia.	Heart Disease.	Cancer.	Hydatid Disease.	Child-bearing.	
N. S. WALES.																	
Sydney	108,870	245	163	40	...	..	2	...	2	5	15	13	21	7	...	4
Suburbs	319,730	849	262	90	...	2	4	3	2	8	21	32	13	13	...	6	
NEW ZEALAND.																	
Auckland & suburbs..	42,718	89	51	13	...	...	1	1	...	...	11	6	4	1	...	...
Christchurch ..	42,311	105	36	10	...	...	...	2	...	...	7	2	5	2	1	2
Dunedin ..	48,991	84	26	3	...	1	...	...	...	...	4	3	1	...	...	...
Wellington ..	38,710	113	46	16	...	...	3	1	1	...	8	2	2	4	...	...
QUEENSLAND.																	
Brisbane	56,075	...	...	...	}	...	...	...	...	...	...	...	...	...	...	...
Suburbs	37,582
SOUTH AUSTRALIA.....	348,126	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adelaide	40,167	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TASMANIA.																	
Hobart	36,099	88	42	7	...	...	...	...	1	...	2	2	...	...	1	1
Launceston.....	23,034	49	28	7	...	...	...	...	...	...	3	3	...	2	...	...
Country Districts	100,426	830	82	...	...	...	...	2	1	...	...	...	...	...	...	...
VICTORIA.																	
Melbourne	64,215	110	58	} 118	...	...	8	33	...	5	71	68	50	38	3	12
Suburbs	374,740	947	514	
Ballarat and Suburbs	42,000
WESTERN AUSTRALIA*	94,373	681	332	100	...	...	4	1	37	14	24	41	29	7	...	2

* For the quarter ending September 30th.

METEOROLOGICAL OBSERVATIONS FOR OCTOBER, 1895.

STATIONS.	THERMOMETER.				Mean Height of Barometer.	RAIN.		Mean Humidity.	Prevailing Wind.
	Maximum Sun.	Maximum Shade.	Mean Shade.	Minimum Shade.		Depth.	Days.		
						Inches			
Adelaide—Lat. 34° 55' 33" S. ; Long. 138° 36' E.....
Auckland—Lat. 36° 50' 1" S. ; Long. 174° 49' 2" E.....	...	69	56.4	44	...	3.80	19	70	...
Brisbane—Lat. 27° 28' 3" S. ; Long. 153° 16' 15" E.
Christchurch—Lat. 43° 32' 16" S. ; Long. 172° 38' 59" E.....	...	75	53.2	26	...	1.53	8	66	...
Dunedin—Lat. 45° 52' 11" S. ; Long. 170° 31' 11" E.....	...	66	49.5	35	...	3.24	16	73	...
Hobart—Lat. 42° 53' 32" S. ; Long. 147° 22' 20" E.....
Launceston—Lat. 41° 30' S. ; Long. 147° 14' E.....
Melbourne—Lat. 37° 49' 54" S. ; Long. 144° 58' 42" E.	86.6	58.7	59.1	29.915	0.57	8	...	...
Perth—Lat. 31° 57' 10" S. ; Long. 115° 52' 20" E.....
Sydney—Lat. 33° 51' 41" S. ; Long. 151° 11' 49" E.....	...	83.8	65.6	52.5	30.096	0.64	10	65	...
Wellington—Lat. 41° 16' 25" S. ; Long. 174° 47' 25" E.....	...	75.5	54.4	35	...	4.06	12	70	...

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